RESULT 2 PCT-US96-12860-5

equence 5, Applicati ENERAL INFORMATION:

, Application PC/TUS9612860

FITLE OF INVENTION:

INHIBITORS OF APOPTOSIS

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                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity
                                                                                                                                                                                                                                                  ENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NFORMATION FOR SEQ ID NO:
                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                               CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE CHARACTERISTICS:
LENGTH: 55 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MOLECULE TYPE:
                                                                                                                                                                                                            PPLICANT:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS:
                                                                                                                                                                            TLE OF INVENTION:
                                                                           COUNTRY:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   UMBER OF SEQUENCES:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME: Brezner, David J.
REGISTRATION NUMBER: 24
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
FILING DATE: 06 AU
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                                                                                                                                                                                                                                                                                                                                             CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKLGDSP 55
                                                                                                                                                                                                                                                                                                                                                                         CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKLGDSP 55
                                                                                                                                                                                                                                                                               ,00
                                                                                                                                   ESSEE:
                                                                                                                                                             OF SEQUENCES:
                                                            02110-2804
                                                                                                     Boston
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                                                                                                                                                                                                                                                                               Application US/08511485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           amino acid
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          California
                                                                           USA
                                                                                                                   225 Franklin Street
   SYSTEM:
                                                                                                                                                                                                       Baird, Stephen
                                                                                                                                                                                                                    Mackenzie, Alexander E.
                                                                                                                                                                                                                                   Korneluk, Robert G.
                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (415)398-3249
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                  IBM PC
                                                                                                                                  Fish &
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
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compatible
PC-DOS/MS-DOS
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                                                                                                                               Richardson P.C
                                                                                                                                                                     MAMMALIAN IAP GENE FAMILY, PRIMERS, PROBES, AND DETECTION METHODS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Release #1.0, Versicn #1.30
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                                                                                                                                                                                                                                                                                                                                                                                                                       Score 307; DB 5;
Pred. No. 4.9e-37;
                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 55;
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CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMI.DNWKLGDSP 55

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RESULT 5 US-08-800-929A-8

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; ORGANISM: Homo sapiens US-09-212-971-8
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                                                                                        SEQ ID NO 8
LENGTH: 618
TYPE: PRT
       Matches
                      Query Match
Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                    atent No.
                                                                                                                                                                                                                                                           URRENT APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                              PPLICANT: Tsang, Benjamin | PPLICANT: Pratt, Christine
                                                                                                                                                                                                                                                                                                                                                               PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: MacKenzie,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                   ARLIER APPLICATION NUMBER: 60
ARLIER FILING DATE: 1996-04-2
                                                                                                                                                                                                                                                                                     TIE OF INVENTION: DISEAS
                                                                                                                                                                                                                                                                            LE REFERENCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE CHARACTERISTICS LENGTH: 618 amino aci
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY: bo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REGISTRATION NUMBER:
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                                                                                                                                                                         APPLICATION NUMBER:
FILING DATE: 1996-1:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                      INFORMATION:
       1 Similarity
55; Conserv
                                                                                                                                                                                                                                                                                               INVENTION: DETECTION AND MODULATION OF TAPS AND INVENTION: NAIP FOR THE DIAGNOSIS AND TREATMENT OF PROLIFERATIVE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        l Similarity 100.
55; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20015
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     Conservative
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                                                                                                                                                                                                                                                                            07891
                                                                                                                                                                                                                                                                                                                                                Benjamin K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             protein
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                                                                                                                                                                                                                   1996-04-26
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                                                                                                                                Windows Version 4.0
                   100.0%;
                                                                                                                                                                                        996-11-
                                                                                                                                                                                                                                                                                                                                                                                        Alexander E
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                 Score 307; DB 3;
Pred. No. 9.1e-36;
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Pred. No. 9.1e-36;
     Mismatches
                             Length
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 Gaps
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US96-12860-7

Application PC/TUS9612860

ITLE OF

TULARIK, INC

INHIBITORS OF APOPTOSIS

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RESULT 3
US-08-511-485-23
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Best Local Similarity
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                                                                                                                                                                                                                                                                                             tent No.
                                                                                                                                                                                                                                                                                ENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOLECULE TYPE: protein
                                                                                                                                                               CORRESPONDENCE ADDRESS:
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                              MEDIUM TYPE: Floppy disk
                                                                                                                                                                                 NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE/DOCKET NUMBER: A: FELECOMMUNICATION INFORMATION
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: amino acid
STRANDEDNESS: si
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
 OPERATING SYSTEM:
                                                                               COUNTRY:
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                                                                                                                                                                                                                                                                                                                                                                                                                          1 LARAGEYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHHPPNCPF 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REGISTRATION NUMBER:
                                                                                                                                              DDRESSEE:
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                                                                                                                                                                                                                                                                                                                                                                                           LARAGEYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHIPNCPF 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                            46;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ICATION NUMBER: U.S. Serial Nos. 08/312,946 & 08/569,749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SSEE: FLEHR, HOHBACH, TEST, ALBRITTON & HERBERT T: 4 Embarcadero Center, Suite 3400 San Francisco
                                                                02110-2804
                                                                                                              Boston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Brezner, David J
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                                                                                                                                                                                                                                                                                                           Application US/08511485
                                                                                                                                 225 Franklin Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      46 amino acids
                                                                                   USA
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                                                                                                                                                                                                                              Baird, Stephen
                                                                                                                                                                                                                                              Mackenzie,
                                                                                                                                                                                                                                                               Korneluk, Robert G.
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                  IBM PC
                                                                                                                                              Fish &
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PC-DOS/MS-DOS
                                                                                                                                              Richardson P.C.
                                                                                                                                                                                            MAMMALIAN IAP GENE FAMILY, PRIMERS PROBES, AND DETECTION METHODS
                                                                                                                                                                                                                                               Alexander E.
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Pred. No. 4.3e-28;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 46;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                            TELEFAX: 201-994-1744
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INFORMATION FOR SEQ ID NO: . 23: SEQUENCE CHARACTERISTICS:
                               SEQUENCE CHARACTERISTICS
                                                                              TELECOMMUNICATION INFORMATION: TELEPHONE: 201-994-1700
                                                                                                                                                                                         PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                      CURRENT APPLICATION DATA:
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                                                                                                                                                        ATTORNEY/AGENT INFORMATION:
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MEDIUM TYPE: 3.5 INC.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: amino acid
STRANDEDNESS: not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE:
                                                                                                                          REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21 LARAGEYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCFF 66
                                                                                                                                                                                                                                                                                                       OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                  STREET:
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                                                                                                               REFERENCE/DOCKET NUMBER:
                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                                       APPLICATION NUMBER:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 LARAGFYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCFF 46
                ENGTH:
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                                                                                                                                         FERRARO, GREGORY D
AMINO ACID
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                438 AMINO ACIDS
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                                                                                                                                                                                                                                                                                                                      IBM PS/2
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3277
1 MHKTASQRLEPGPSYQNIKS......LNKCPTCRGTIKGTVRTELS 618
                      BLOSUM62
                                                                                                                                   May 5, 2003, 15:59:02; Search time 42.0069 Seconds (without alignments)
432.865 Million cell updates/sec
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                            GenCore version 5.1.4_p5_4578 Copyright (c) 1993 - 2003 Compugen Ltd.
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Searched: 262574 seqs, 29422922 residues

Total number of hits satisfying chosen parameters: 262574

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database :

Issued_Patents_AA: *

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/cgn2_6/ptodata/1/iaa/5A_COMB.pep:*
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/cgn2_6/ptodata/1/iaa/Backfiles1.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution. ÷, -

SUMMARIES

Result No.	Score	Query Match	Query Match Length I	BG	ID	Description
1	3277	100.0	618	4:	US-08-569-749-2	Sequence 2, Appli
N	3277	100.0	618	4	US-09-069-023-29	29
ω	3277	100.0	618	v	PCT-US96-12860-2	2, 1
4	3247	•	618	N	US-08-511-485-8	8
5	3247	99.1	618	w	US-09-212-971-8	8
6	3247	99.1	618	4	US-08-800-929A-8	80
7	3247	99.1	618	4	-09-617-053A-	8
80	2728	83.2	612	4	US-08-569-749-14	14,
9	2728	83.2	612	U	PCT-US96-12860-14	Sequence 14, Appl
10	2724	83.1	612	w	US-09-212-971-14	14,
11	2724	83.1	612	4	US-08-800-929A-14	.14,
12	2724	83.1	612	4	US-09-617-053A-14	14,
13	2353	71.8	604	4	US-08-569-749-4	4, 2
14	2353	71.8	604	σ	PCT-US96-12860-4	4,
15	2332	71.2	604	N	US-08-511-485-6	, o
16	2332	71.2	604	ω	US-09-212-971-6	6
17	2332	71.2	604	4	US-08-800-929A-6	6,
18	2332	71.2	604	4	US-09-617-053A-6	6
19	2326	71.0	438	σ	PCT-US95-05922A-2	2
20	2172	66.3	600	w	US-09-212-971-12	12,
21	2172	66.3	600	4	US-08-800-929A-12	12,
22	2172	66.3	600	4	US-09-617-053A-12	12,
23	909	27.7	497	N	US-08-511-485-4	Sequence 4, Appli
24	909	27.7	497	w	US-09-212-971-4	4
25	909	27.7	497	4	US-08-800-929A-4	4
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89	236	236	236	275	275	275	1232	1232	1151	1151	236	268	268	498	496	496	496
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US-09-099-041A-32	US-09-239-867-2	US-09-332-319-4	US-09-121-979-4	US-09-493-784-21	US-08-836-134-21	US-08-511-485-12	US-09-493-784-2	US-08-836-134-2	US-09-493-784-23	US-08-836-134-23	US-09-239-867-4	US-09-493-784-22	US-08-836-134-22	US-08-511-485-13	US-09-617-053A-10	US-08-800-929A-10	US-09-212-971-10
Sequence 32, Appl	Sequence 2, Appli	Seguence 4, Appli	Sequence 4, Appli	Sequence 21, Appl	Sequence 21, Appl		Sequence 2, Appli	Sequence 2, Appl1	Sequence 23, Appl	Sequence 23, Appl	Sequence 4, Appli		Sequence 22, Appl	•	•	ನeguance 10, Appl	•

ALIGNMENTS

Gaps	, c	Indels	ç,	Mismatches		0;	itive	Conservative	618;	Matches	
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						4,774	ER: 2	REGISTRATION NUMBER: 24,774	JISTRAT	REC	٠.
						• `	avid J	NAME: Brezner, David J.	ME: Br	NAN	٠.
						ž	MATIO	ATTORNEY/AGENT INFORMATION:	RNEY/AG	ATTOF	٠.
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					us/08/569,749	/08/5		APPLICATION NUMBER:	PLICATI	API	٠.
							DATA:	CURRENT APPLICATION DATA:	ENT APP	CURRE	٠.
			#1.30	Version		ease	in Rel	PatentIn Release #1.0,	SOFTWARE:	308	٠.
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							Mike.	APPLICANT: * Rothe. N	CANTON	APPLI	
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                                                                                                                                                                         ; ORGANISM: Homo sapiens
US-09-069-023-29
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CURRENT FILING DATE: 1998-04-27
NUMBER OF SEQ ID NOS: 38
SOFTWARE: PATENTIN VET. 2.0
SEQ ID NO 29
                                                                                                                              Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 2
                                                                                                                Matches
                                                                                                                                                                                                                                                                                                   APPLICANT: Nunez, Gabriel
APPLICANT: Inohara, Naohiro
APPLICANT: Koseki, Takeyoshi
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR IDENTIFYING APOPTOSIS
TITLE OF INVENTION: SIGNALING PATHWAY INHIBITORS AND ACTIVATORS
FILE REFERENCE: UM-03333
                                                                                                                                                                                                     LENGTH: 61
TYPE: PRT
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             PVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKLGDSPIQKHKQLYPSCSFIQNLVSAS 120
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GENERAL INFORMATION:
                                                            PRIOR APPLICATION DATA:
APPLICATION NUMBER: U.S. Seri
CLASSIFICATION:
ATTORNEY/AGENT INFORMATION:
NAME: Brezner, David J.
REGISTRATION NUMBER: 24,774
REFERENCE/DOCKET NUMBER: A-62
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415)781-1989
                             INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                            COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
CURRENT APPLICATION DATA:
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               SEQUENCE CHARACTERISTICS:
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STATE:
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amino acids
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                                                                                                                                                                                Serial
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; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
PCT-US96-12860-2
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                                                                                            Sequence 8, Application US/08511485
Patent No. 5919912
GENERAL INFORMATION:
APPLICANT: Korneluk, Robert G.
APPLICANT: Mackenzie, Alexander E.
APPLICANT: Baird, Stephen
TITLE OF INVENTION: MANMALIAN IAP GENE FAMILY, PRI
TITLE OF INVENTION: PROBES, AND DETECTION METHODS
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Best Local Similarity
Matches 618; Conserv
                                                                      NUMBER OF SEQUENCES:
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Pred. No. 3.4e-308;
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Best Local Sim
Matches 614;
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TELECOMMUNICATION INFORMATION:
TELEPHONE: 617/542-5070
TELEPAX: 617/542-8906
TELEX: 200154
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPUTER: COMPUTER: PC-DOS/MS-DOS
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTORNEY/AGENT INFORMATION:
NAME: Clark, Paul T.
REGISTRATION NUMBER: 30,
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                                   KCPICRGIIKGTVRTFLS
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; TITLE OF INVENTION: DETECTION AND MODULATION CF IAPS AND TITLE OF INVENTION: NAIP FOR THE DIAGNOSIS AND TREATMENT OF TITLE OF INVENTION: DISEASE ; FILE REFERENCE: 07891/009002 ; CURRENT APPLICATION NUMBER: US/09/212,971B ; CURRENT EPILING DATE: 1998-12-16 ; EARLIER APPLICATION NUMBER: 60/017,354 ; EARLIER APPLICATION NUMBER: 60/017,354 ; EARLIER FILING DATE: 1996-04-26 ; EARLIER APPLICATION NUMBER: 60/030,590 ; EARLIER APPLICATION NUMBER: 08/800,929 ; EARLIER APPLICATION NUMB
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LENGTH: 618
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APPLICANT: Liston, Peter
APPLICANT: Baird, Stephen
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SOFTWARE: FastSEQ for
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APPLICANT: Pratt, Christine
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                                                                                                             GENYKTVNDIVSALLNAEDEKREEEKEKQAEEMASDDLSLIRKNRMALFQQLTCVLPILD
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                                                                                                          Query Match
Best Local Similarity
Matches 614; Conserv
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                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/030,590
FILING DATE: 14 NOV-1996
APPLICATION NUMBER: 60/017,354
FILING DATE: 26-APR-1996
ATTORNEY/AGENT INFORMATION:
NAME: Bieker-Brady, Kristina
REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
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SEQUENCE CHARACTERISTICS:
LENGTH: 618 amino acids
TYPE: amino acid
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OPERATING SYSTEM: DOS
SOFTWARE: FASTEED for Windows Version
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/800,929A
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MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                     TELECOMMUNICATION INFORMATION: TELEPHONE: 617-428-0200
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PRIOR APPLICATION DATA:
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ADDRESSEE: Clark & Elbing
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TITLE OF INVENTION:
NUMBER OF SEQUENCES:
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APPLICANT: Pratt, Christine
TITLE OF INVENTION: DETECTION
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TOPOLOGY: line
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 13-FEB-1997
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                                                      PVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKLGDSPIQKHKQLYPSCSFIQNLVSAS 120
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                                                                                                                                                                                                    SS: single
linear
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S: 17
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Pred. No. 2.7e-305;
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FOR THE DIAGN
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APPLICANT: TSANG, BENJAMIN K
APPLICANT: PRART, Christine
FITILE OF INVENTION: DETECTION AND MODULATION OF IAP
FITILE OF INVENTION: DISEASE
FILE REFERENCE: 07891/009003
CURRENT APPLICATION NUMBER: US/09/617,053A
CURRENT ETLING DATE: 2000-07-14
PRIOR APPLICATION NUMBER: US 08/800,929
PRIOR APPLICATION NUMBER: US 08/800,929
PRIOR FILING DATE: 1997-02-13
NUMBER OF SEQ ID NOS: 17
SOFTWARE: FASTSEQ for Windows Version 4.0
SEQ ID NO 8
LENGTH: 618
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APPLICANT: MacKenzie, Alexan
APPLICANT: Liston, Peter
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                                                                                                            LENGTH: 618
TYPE: PRT
ORGANISM: Homo sapiens
09-617-053A-8
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              MHKTASQRLFPGPSYQNIKSIMEDSTILSDWTNSNKQKMKYDPSCELYRMSTYSTFPAGV
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MHKTASQRLFPGPSYQNIKSIMEDSTILSDWTNSNKQKMKYDFSCELYRMSTYSTFPAGV
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                                                                                                                                                                                                                                                                                                                                                                                                                              8, Application US/09617053A
o. 6300492
                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                      Baird, Stephen
                                                        Conservative
                                                                 99.1%;
99.4%;
                                                                                                                                                                                                                                                                                                                                                                                    Alexander
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                                                                   Score 3247;
Pred. No. 2.
                                                        Mismatches
                                                                   ; DB 4;
2.7e-305;
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                                                                                                                                                                                                                                                                                                                                                                 Sequence 14, Application US/08569749 Patent No. 6187557
                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
APPLICANT: Rothe, Mike
APPLICANT: Goeddel, David V
TITLE OF INVENTION: INHIBITORS OF
NUMBER OF SEQUENCES: 14
CORRESPONDENCE ADDRESS:
CLASSIFICATION: 514
ATTORNATION:
ATTORNATION:
NAME: Brezner, David J.
REGISTRATION NUMBER: 24,774
REFERENCE/DOCKET NUMBER: A-62
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415)781-1989
                                                                                                                                    ZIP: 94111
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                        SOFTWARE: Patentin Release #1.0, Version CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/569,749
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CITY: San Francisco
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                                                                                               FILING DATE:
                                                                                                                                                                                                        COUNTRY: U
ZIP: 94111
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                              A-62464/DJB
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INFORMATION FOR

SEQUENCE CHARACTERISTICS:

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Best Local S
                                                                                                                      Sequence 14, Application PC/TUS9612860 GENERAL INFORMATION:
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TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
08-569-749-14
                 CORRESPONDENCE ADDRESS:
ADDRESSEE: FLEHR, HOHBACH, TEST, ALBRITTON
STREET: 4 Embarcadero Center, Suite 3400
CITY: San Francisco
STATE: California
COUNTRY: USA
                                                                                                APPLICANT: TULARIK, INC.
TITLE OF INVENTION: INHIBITORS OF APOPTOSIS
COMPUTER READABLE FORM
                                                                                     NUMBER OF SEQUENCES:
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                                                                 & HERBERT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
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INFORMATION FOR SEQ ID NO: 14:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: PatentIn Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS:
LENGTH: 612 amino acids
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               599
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COMPUTER: IF
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION
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LRKCPICRGIIKGTVRTFLS
                                                     LFVDKNMKYIPTEDVSGLSLEEQLRRLQEERTCKVCMDKEVSVVFIPCGHLVVCQECAPS 598
                                                                                            ATGENYRTVNDIVSVLLNAEDERREEEKERQTEEMASGDLSLIRKNRMALFQQLTHYLPI
                                                                                                                                                              TTGENYKTVNDIVSALLNAEDEKREEEKEKQAEEMASDDLSLIRKNRMALFQQLTCVLPI
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                                       LFVEKNMKYIPTEDVSGLSLEEQLRRLQEERTCKVCMDREVSIVFIPCGHL;VCQECAPS
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; Pred. No. 4.5e-255;
45; Mismatches 48;
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TITLE OF INVENTION: DIFECTION AND MODULATION OF TAPS AND TITLE OF INVENTION: NAIP FOR THE DIAGNOSIS AND TREATMENT OF TITLE OF INVENTION: DISEASE FILE REFERENCE: 07891/009002 CURRENT APPLICATION NUMBER: US/09/212,971B CURRENT FILING DATE: 1998-12-16 EARLIER APPLICATION NUMBER: 60/017,354 EARLIER APPLICATION NUMBER: 60/017,354 EARLIER FILING DATE: 1996-04-26 EARLIER FILING DATE: 1996-04-26 EARLIER FILING DATE: 1996-11-14 EARLIER FILING DATE: 1996-10-1906-11-14 EARLIER APPLICATION NUMBER: 08/800,929 EARLIER APPLICATION NUMBER: 08/800,929 EARLIER APPLICATION NUMBER: 1997-02-13
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US-09-212-971-14
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Best Local Similarity
Matches 516; Conserv
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APPLICANT: Pratt, Christine
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APPLICANT: MacKenzie, Alexander E
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LDNLLKANVINKQEHDIIKQKTQIPLQARELIDTILVKGNAAANIFKNCLKEIDSTLYKN 538
                                                                        TTGENYKTVNDIVSALLNAEDEKREEEKEKQAEEMASDDLSLIRKNRMALFQQLTCVLPI 478
                                                                                                                                                   STSDTTGEENADP--PIIHEGPGESSSEDAVMMNTPVVKSALEMGENRDLVKQTVQSKIL 418
                                                                                                                                                                                                                           NDDVKCFCCDGGLRCWESGDDPWVEHAKWFPRCEFLIRMKGQEFVDEIQGRYPHLLEQLL
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                                                                                                                        STSDTPGEENADPTETVVHFGPGE-SSKDVVMMSTPVVKAALEMGFSRSLVRQTVQRQIL 412
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Pred. No. 1.
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hes 48;
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                                                                                                            Matches
                                                                                                                                         Query Match
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APPLICATION NUMBER: 60/030,590
FILING DATE: 14-NOV-1996
APPLICATION NUMBER: 60/017,354
FILING DATE: 26-APR-1996
ATTORNEY/AGENT INFORMATION:
NAME: Bieker-Brady, Kristina
REGISTRATION NUMBER: 07891/009001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
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                                                                                                                                                                                                                                  SEQUENCE CHARACTERISTICS:
LENGTH: 612 amino acids
TYPE: amino acid
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OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for
CURRENT APPLICATION DATA:
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TITLE OF INVENTION:
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MEDIUM TYPE: Diskett
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61 PVSERSLARAGEYYTGVNDKYKCFCCGLMLDNWKLGDSPIQKHKQLYPSCSFIQHLVSAS 120
                                                                                                                           Local Similarity
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                                                              1 MHKTASQRLFPGPSYQNIKSIMEDSTILSDWTNSNKQKMKYDFSCELYRMSTYSTFPAGV 60
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                                               MDKTVSQRLGQGTLHQKLKRIMEKSTILSNWTKESEEKMKFDFSCELYRMSTYSAFPRGV 60
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Pratt, Christine
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                                                                                                            Conservative
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Pred. No. 1.
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RESULT 12
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US-09-617-053A-14
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CURRENT APPLICATION NUMBER: US/09/617,053A

CURRENT FILING DATE: 2000-07-14
                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Korneluk, Robert G
APPLICANT: MacKenzie, Alexan
                                                                                                                                                                 SOFTWARE: F
                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: US 08/800,929 PRIOR FILING DATE: 1997-02-13
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           MHKTASQRLFPGPSYQNIKSIMEDSTILSDWTNSNKQKMKYDI/SCELYRMSTYSTFPAGV
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                                                                 Similarity
                                                                                                                                                                              FastSEQ for
                                                                                                                                                                                                                                                                                                                                 Tsang,
                                                                                                                                                                                                                                                                                                                      Pratt, Christine
                                                                                                                                                                                                                                                                                                                                                  Baird,
                                                                                                                                                                                                                                                                                                                                                                 Liston,
                                                                                                                         musculus
                                                                                                                                                                                                                                                                                                                                                  Stephen
                                                                                                                                                                                                                                                                                                                                    Benjamin K
                                                                                                                                                                                                                                                                                                                                                                 Peter
                                                                                                                                                                              Windows Version 4.0
                                                                83.1%;
83.2%;
                                                                                                                                                                                                                                                                                                                                                                              Alexander E
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                                                    46;
                                                 Score 2724; DB 4;
Pred. No. 1.1e-254;
6: Mismatches 48;
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                                                                                                                                                                                                                                                                                                                                                                                      Patent No. 6187557
                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                      ZIP: 94111

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.30

CURRENT APPLICATION DATA:
          REGISTRATION NUMBER: 24,774
REFERENCE/DOCKET NUMBER: A-
TELECOMMUNICATION INFORMATION:
                                                     ATTORNEY/AGENT INFORMATION: NAME: Brezner, David J.
                                                                                                                                                                                                                                 STREET: 4 ENCL.
CITY: San Francisco
STATE: California
                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                APPLICANT: Rothe, Mike
APPLICANT: Goeddel, David V
TITLE OF INVENTION: INHIBITORS OF APOPTOSIS
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                                                                                   CLASSIFICATION:
                                                                                                                                                                                                                              COUNTRY:
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                                                                                                  FILING DATE:
                                                                                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                       ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LFVDKNMKYIPTEDVSGLSLEEQLRRLQEERTCKVCMDKEVSVVFIPCGHLVVCQECAPS
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                                                                                                                                                                                                                                                                        4 Embarcadero Center, Suite 3400
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(415)781-1989
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TELEFAX: (415)398-3249
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:

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STRANDEDNESS:

SS: single linear

TYPE: amino acids

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PCT-US96-12860-4
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                                                                                                                 Sequence 4, Application PC/TUS9612860 GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local
                                                              NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
                                                                                       APPLICANT: TULARIK, INC.
TITLE OF INVENTION: INHIBITORS OF APOPTOSIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TOPOLOGY: 15
MOLECULE TYPE:
                                                                                                                                                                                                  601
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          ADDRESSEE: FLEHR, HOHBACH, TEST, ALBRITTO
STREET: 4 Embarcadero Center, Suite 3400
CITY: San Francisco
STATE: California
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COUNTRY:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      THSLLPGTENSGYFRGSYSNSPSNPVNSRANQDFSALMRSSYHCAMNNENARLLTFQTWP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AHSLSPTLEHSSLFSGSYSSLSPNPLNSRAVEDISSSRTUPYSYAMSTEEARFLTYHMWP 195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DKVKCFCCGLMLDNWKLGDSPIQKHKQLYPSCSFIQNLVSA-SLGSTSKNTSP--MRNSF 135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NIVENSIFLSNLMKSANTFELKYDLSCELYRMSTYSTFPAGVPVSERSLARAGFYYTGVN 61
                                                                                                                                                                                                                                                   DLPVEEQLRRLQEERTCKVCMDKEVSIVFIPCGHLVVCKDCAPSLRKCPICRSTIKGTVR
                                                                                                                                                                                                                                                                                                     VIKQKTQTSLQARELIDTILVKGNIAATVFRNSLQEAEAVLYEHLFVQQDIKYIPTEDVS
                                                                                                                                                                                                                                                                                                                   IIKQKTQIPLQARELIDTILVKGNAAANIFKNCLKEIDSTL7KNLFVDKNMKYIPTEDVS
                                                                                                                                                                                                                                                                                                                                                                                                         IIHFEPGEDHSEDAIMMNTPVINAAVEMGFSRSLVKQTVQKKILATGENYRLVNDLVLDL
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72.88;
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Pred. No. 8.5e-219;
1; Mismatches 87;
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                                                   ALBRITTON
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Best Local Similarity
Matches 440; Conserv
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TELEFAX: (415)398-3249
INFORMATION FOR SEQ ID NO: 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME: Brezner, David J.
REGISTRATION NUMBER: 24,774
REFERENCE/DOCKET NUMBER: A-(
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415)781-1989
TELEPHONE: (415)781-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY: 11 MOLECULE TYPE:
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ATTORNEY/AGENT INFORMATION:
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MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE CHARACTERISTICS:
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                                                            481
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STRANDEDNESS: sir
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
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                                                                                                                                                                                                                                       IIHFGPGESSSEDAVMMNTPVVKSALEMGFNRDLVKQTVQSKILTTGENYKTVNDIVSAL
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                                                            VIKQKTQTSLQARELIDTILVKGNIAATVFRNSLQEAEAVLYEHLFVQQDIKYIPTEDVS
                                                                          IIKQKTQIPLQARELIDTILVKGNAAANIFKNCLKEIDSTLYKNLFVDKNMKKIPTEDVS
                                                                                                                    LNAEDETREEERERATEEKESNDLLLIRKNRMALFQHLTCVIPILDSLLTAGIINEQEHD
                                                                                                                                  LNAEDEKREEEKEKQAEEMASDDLSLIRKNRWALFQQLTCVLFILDNLLKANVINKQEHD 494
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NIVENSIFLSNLMKSANTFELKYDLSCELYRMSTYSTFPAGVPVSERSLARAGFYYTGVN 61
                                                                                                                                                                                                                                                                                                                                ETLRFSISNLSMQTHAARMRTFMYWPSSVPVQPEQLASAGFYYVGRNDDVKCFCCDGGLR
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06 AUG 1996
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US-08-511-485-6
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Best Local Similarity
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TELEX: 200154
INFORMATION FOR SEQ ID NO:
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APPLICANT: Kornel
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LENGTH: 604 amino acid
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CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/511,485
FILING DATE: 04-AUG-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CORRESPONDENCE ADDRESS
                               NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION:
316 WESGDDPWVEHAKWFPRCEFLIRMKGQEFVDEIQGRYPHLLECLLSTSDTTGEENADPPI 375
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH: 604 amino acids TYPE: amino acid STRANDEDNESS: not releva
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADDRESSEE:
                                                                                               TFLSPSELARAGFYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCPFLENSL-E 255
                                                                                                                                                                  HSLLPGTENSGYFRGSYSNSPSNPVNSRANQEFSALMRSSYPCPMNNENARLLTFQTWPL 181
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225 Franklin Street
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Baird, Stephen
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                                                                                                                                                                                                   422 NAEDEIREEERERATEEKESNDLLLIRKNRMALFQHLTCVIPILDSLLTAGIINEQEHDV
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FLS
                                                                   LPVEEQLRRLPEERTCKVCMDKEVSIVFIPCGHLVVCKDCAPSLRKCPICRSTIKGTVRT
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Search completed: May 5, 2003, 16:09:08 Job time: 44.0069 secs

GenCore version 5.1.4_p5_4578 Copyright (c) 1993 - 2003 Compugen Ltd.

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Title:
Perfect score:
Sequence:
                                                                                                                                                                                                                                                                      Result
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Listing first 45 summaries
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2:
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                                                                                                                                                                                                                                                                   Score
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seq length: 2000000000
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Match
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Gapop 10.0 , Gapext 0.5
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22-DEC-1995; 20-DEC-1996; 03-JUL-1997. WO9723501-A1

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_finger		lifiers		IAP; mammalian IAP disease; autoimmur	protein homologue MIHB.			518 AA.	ALIGNMENTS	AAB48192 AAB48191	AAB48188	ABB61858	AAB48189 AAB48190	AA020511	AAW19748 AAE10158	ABB62863	ABG65666 AAII75747	AAW69297	AAY59451	AAY99985 ABG65663	AAW69294	AAW19745 AAW19581	AAU02925	AAB50694	AAW19585	AAW59298 ABG65667	AAW04583	ABG65664	AAW19582	AAY33997	AAY52703	974 354
				homologue; MIHB; ne disease;						Drosophila mutant	Drosophila wild-ty	Drosophila melanog	Prosophila mutant		Drosophila inhibit	Drosophila melanog	Mouse inhibitor of	Murine XIAP protei	Human XIAP protein	Human X-linked inh Human inhibitor of		inhi	tensi	cystier	apoptos	Murine HIAP-I prot	inhibit	Human hihibitor of	apoptosis	cellula	7	inhibitor

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mammalian IAP homologue B (MIHB) (AAW19746) %s a human homologue of baculovirus inhibitor of apoptosis protein (FAP). Its amino acid sequence was deduced from a cDNA clone (see also AAT7271) isolated from a human foetal liver cDNA library using primers based on human EST sequences that resembled the BIR repeats of Orygia pseudotsuguta polyhedrosis virus IAP. IAP homologues (see also AAW19745 and AAW19747-52) and their derivatives and chemical analogues can be used in methods for modulating apoptosis in animal cells, specifically for treatment, by inhibition, of degenerative and infectious disease or, by promotion, of cancer and autoimmune
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                                                    VDKNMKYIPTEDVSGLSLEEQLRRLQEERTCKVCMDKEVSVVFIPCGHLVVCQBCAPSLR
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The human cellular inhibitor of apoptosis proteins (c-IAP1/2 - AA761590)/T61591) comprise a series of defined structural domain repeats and/or a RING finger domain; in particular, at least two of a first domain repeat (AAW13547 or AAW13548), a second domain repeat (AAW13549) or AAW13550), and a third domain repeat (AAW13551 or AAW13552) and/or a RING finger domain (AAW13553 or AAW13554), or a consensus sequences derived from these human genes. The nucleic acid is used for recombinant prodon of human cellular inhibitor of apoptosis protein which modulates apoptosis regulation. The nucleic acids are useful in therapies where increased cell-specific apoptosis is desired, e.g. in restinosis, inflammatory disease states, myocardial infarction, glomerular nephritis, transplant rejection and infectious diseases, e.g. HIV.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Nucleic acids encoding cellular inhibitor of apoptosis useful for apoptosis regulation in cells to reduce or i apoptosis and for pharmacological screening
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08-AUG-1995;
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myocardial infarction; nephritis; HIV.
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                                                                                                                                   Antisense compounds complementary useful for e.g. diagnostics, there
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                                                  The
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human cellular inhibitor of
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    (c-IAP-1).
                                                                                                                                                                                                                                                                             Bennett CF,
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                       The invention provides inhibit the expression
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DB; AAZ22143.
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antisense compounds of 8-30 of human Cellular Inhibitor
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                                                                                                                                                                                                                                                                             Ackermann
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                                                                                                                                     ntary to Cellular Inhibitor of therapeutics, and as research
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                                                                                          English.
of 8-30 nucleotides that nhibitor of Apoptosis-1 used for diagnostics,
                                                                                                                                     Apoptosis-1 reagents -
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Best Local Similarity 100.0%;
Matches 618; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              therapeutics (for modulating the expression of c-IAP-1), prophylaxis (e.g. to prevent or delay infection, inflammation, or tumor formation), as research reagents (e.g. to distinguish between members of a biological pathway) and in kits. The present sequence represents the human cellular inhibitor of apoptosis-1.
                                      Apoptosis inhibitor; HIAP-2; HIV; AIDS; neurodegeneration; myelodysplastic syndrome; ischaemia; myocardial infarction reperfusion injury; toxin-induced liver disease; gene ther
                                                                                                                                                                      AAW19583 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                           Human apoptosis inhibitor HIAP-2.
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Pred. No. 1.4e-284;
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Matches 614
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Nucleic acid encoding an inhibitor of apoptosis polypeptide to inhibit apoptosis in e.g. HIV or AIDS patients, and for det of susceptibility to apoptotic disease
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04-AUG-1995;
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                                              MSTEEARFLTYHMWPLTFLSPSELARAGFYYIGPGDRVACFACGGKLSNWEPKDDAMSEH
                                                                                            LGSTSKNTSPMRNSFAHSLSPTLEHSSLFSGSYSSLSPNPLNSRAVEDISSSRTNPYSYA 180
                                                                                                                                           PVSERSLARAGETYTGVNDKVKCFCCGLMLDNWKLGDSPIQKHKQLYPSCSETQNLVSAS 120
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            RRHFPNCPFLENSLETLRFSISNLSMQTHAARMRTFMYWPSSVPVQPEQLASAGFYYVGR
RRHFPNCPFLENSLETLRFSISNLSMQTHAARMRTFMYWPSSVPVQPEQLASAGFYYVGR
                                                                                                                                                                                                                                               614;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            27; Page 75-77; 219pp; English.
                                                                                                                                                                                                                                                        Similarity
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95US-0511485.
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tive 0; Mismatches
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Tsang B;
                                                                                                                  Inducing apoptosis in proliferative mammalian cells with inhibitor of IAP or NAIP polypeptide - also methods for prognosis based on presence of IAP and NAIP, specifically applied to cancers involving p53 mutations
                                                                                                                                                              WPI; 1998-467164/40.
N-PSDB; AAV55040.
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                                                                                                                                                                                                                                                                                                                              Inhibitor of apoptosis proliferative disease;
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IAP; therapy; cancer; human;
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This sequence is the human HIAP-2 protein, which is a inhibitor of apoptosis protein (IAP), and can be used in the method of the invention. The method is for enhancing apoptosis in cells from a mammal with proliferative disease by treatment with a compound that inhibits biological activity of an IAP or NAIP polypeptide. The inhibitory compounds are used to treat proliferative diseases, specially cancers of ovary, breast, pancreas, lymph nodes, skin, blood, lung, brain, kidney, liver nasopharnyx, thyroid, central nervous system, prostate, colon, rectum, cervix or endometrium, particularly to increase their sensitivity to chemotherapeutic agents. High levels of the IAP or NAIP proteins are

Disclosure; Fig

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147pp; English.

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RESULT 6
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DT 26-A
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      cytostatic; cancer; ovarian cancer; adenocarcinoma; lymphoma; IAP; pancreatic cancer; embryonic development; viral pathogenesis; autoimmune disorder; neurodegenerative disease; multiple sclerosis; lupus erythematosus; herpes virus infection; pox virus infection;
                                                     Human; antisense;
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                                                                                             (first entry)
                                                 inhibitor of apoptosis; HIAP1; HIAP2; XIAP;
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99.48;
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                                                                                                                                                                                                                                                                                       Query Match
Best Local Sim
Matches 614;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Novel antisense inhibitor of apoptosis nucleic acid useful enhancing apoptosis in a cell, for treating cancer and othe proliferative diseases
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The human cellular inhibitor of apoptosis proteins (c-IAP1/2 - AAV61590/761591) comprise a series of defined structural domain repeats and/or a RING finger domain; in particular, at least two of a first domain repeat (AAW13547 or AAW13548), a second domain repeat (AAW13549) or a consensus and/or a RING finger domain (AAW13548), or a consensus sequences derived from these human genes. The nucleic acid is used for recombinant prodon of human cellular inhibitor of apoptosis protein which modulates apoptosis regulation. The nucleic acids are useful in therapies where increased cell-specific apoptosis is desired, e.g. in restinosis, inflammatory disease states, myocardial infarction, glomerular nephritis, transplant rejection and infectious diseases, e.g. HIV. They can also be used in conditions requiring a meduction in
                                                                                                                                                                                                             Nucleic acids encoding cellular inhibitor of apoptosis proteins useful for apoptosis regulation in cells to reduce or increase apoptosis and for pharmacological screening
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              myocardial infarction; nephritis;
                                                                                                                                                                                     Disclosure; Page 28-29; 35pp; English
                                                                                                                                                                                                                                                                   WPI; 1997-154209/14.
N-PSDB; AAT61592.
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08-AUG-1995;
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e disease;
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                                                            protein; apoptosis enhancer;
IAP; therapy; cancer; mouse;
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HIAP-2 protein.
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13-FEB-1998; 20-AUG-1998

98WO-IB00781

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Best Local Similarity Matches '516; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The method is for enhancing apoptosis in cells from a mammal with proliferative disease by treatment with a compound that inhibits biological activity of an IAP or NAIP polypeptide. The inhibitory compounds are used to treat proliferative diseases, specially cancers of ovary, breast, pancreas, lymph nodes, skin, blood, lung, brain, kidney, liver nasopharnyx, thyroid,central nervous system, prostate, colon, rectum, cervix or endometrium, particularly to increase their sensitivity to chemotherapeutic agents. High levels of the IAP or NAIP proteins are detected in many cancers and are associated with poor prognosis, suggested that wild-type p53 suppresses transcription of the IAP or NAIP genes). Transgente animals are used for testing the effects of antisense transcription.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This sequence
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LDNLLKANVINKQEHDIIKQKTQIPLQARELIDTILVKGNAAANIFKNCLKEIDSTLYKN 538
                                                                                                                                                                                                                                                                     NDDVKCFCCDGGLRCWEPGDDPWIEHAKWFPRCEFLIRMKGQE; VDEIQARYPHLLEQLL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LQSPSKNMSPVKSRFAHS-SP-LER----GGIHSNLCSSPLNSRAVEDF-SSRMDPCSYA
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                                                  ATGENYRTVNDIVSVLLNAEDERREEEKERQTEEMASGDLSLIRKNRMALFQQLTHVLPI
                                                                                                     TTGENYKTVNDIVSALLNAEDEKREEEKEKQAEEMASDDLSLIRKNRMALFQQLTCVLPI 478
                                                                                                                                                          STSDTPGEENADPTETVVHFGPGE-SSKDVVMMSTPVVKAALEMGFSRSLVRQTVQRQIL
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Pred. No. 5.2e-235;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT
M-HIAP-2 (AAW19581-86) are a new class of mammalian proteins that are inhibitors of apoptosis (IAP) and which are characterised by the presence of a ring zinc finger domain (see also AAW19587) and at least one BIR (baculovirus IAP repeat) domain (see also AAW19588). The M-HIAP amino acid sequences were deduced from isolated m-hiap cDNA clones (AAT70840-41). IAP polypeptides can be expressed in host cells (in vitro or in vivo) and used in methods for treating diseases and disorders involving apoptosis, esp. in a human diagnosed as HIV-positive or as having AIDS, a neurodegenerative disease, a myelodysplastic syndrome or an ischaemic injury, seleted from myocardial infarction, stroke, reperfusion injury, or a toxin-
                                                                                                                                                                                                          Nucleic acid encoding an inhibitor of apoptosis polypeptide to inhibit apoptosis in e.g. HIV or AIDS patients, and for of susceptibility to apoptotic disease
                                                                                                                                                                                                                                                                  WPI; 1997-154262/14.
N-PSDB; AAT70841.
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04-AUG-1995;
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reperfusion injury; toxin-induced liver disease; gene therapy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mouse apoptosis inhibitor M-HIAP-2
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                                                                                                                                                     Human XIAP, HIAP-1 and HIAP-2 and murine M-XIAP, M-HIAP-1 and
                                                                                                                                                                                 Claim 30; Page 100-102; 219pp; English.
                                                                                                                                                                                                                                                                                                          Baird
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                                                                                                                                                                                                                                                                                                                                                                                                      05-AUG-1996;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              inhibitor; M-HIAP-2; HIV; AIDS; neurodegeneration; lastic syndrome; ischaemia; myocardial infarction;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry
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95US-0511485.
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RESULT 10
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Best Local S
Matches 502
                                                                                    Mouse; antisense; inhibitor of apoptosis; HIAP1; HIAP2; XIAP; cytostatic; cancer; ovarian cancer; adenocarcincma; lymphoma; IAP; pancreatic cancer; embryonic development; viral pathogenesis; autoimmune disorder; neurodegenerative disease; multiple sclerosis; lupus erythematosus; herpes virus infection; pox virus infection;
                   04-APR-2002
27-SEP-2001; 2001WO-CA01379
                                       WO200226968-A2
                                                                                                                                                     Mouse
                                                                                                                                                                                                               ABG65668 standard;
                                                                                                                                                                         26-AUG-2002
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                                                                                                                                                                                                                                                             TQIPLQARELIDTILVKGNAAANIFKNCLKEIDSTLYKNLFYDKNMKYIPTEDVSGLSLE 559
                                                                                                                                                                                                                                                                                                                                           PWVEHAKWFPRCEFLIRMKGQEFVDEIQGRYPHLLEQLLS%SDTTGEENADP--PIIHFG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SNLSMQTHAARMRTFMYWPSSVPVQPEQLASAGFYYVGRNDDVKCFCCDGGLRCWESGDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SELARAGFYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCPFLENSLETLRFSI 261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TLEHSSLFSGSYSSLSPNPLNSRAVEDISSSRTNPYSYAMSTEEARFLTYHMWPLTFLSP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KCFCCGLMLDNWKLGDSPIQKHKQLYPSCSFIQNLVSASIGSTSKNTSPMRNSFAHSLSP 141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEKSTILSNWTKESEEKMKFDFSCELYRMSTYSAFPRGVI;VSERSLARAGFYYTGVNDKV
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -LER----GGIHSNLCSSPLNSRAVEDF-SSRMDPCSYAMSTEEARFLTYSMWPLSFLSP 173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KCFCCGLMLDNWKQGDSPVEKHRQFYPSCSFVQTLLSASIQSPSKNMSPVKSRFAHS-SP
                                                                                                                                                 inhibitor of apoptosis,
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                                                                            infection; proliferative
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ilarity 83.8%;
Conservative 4
                                                                                                                                                                       (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 2654; DB 18;
Pred. No. 9.4e-229;
                                                                                                                                                   HIAP2
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The invention relates to an inhibitor of apoptosis (IAP) antisense nucleic acid (I) that inhibits IAP biological activity, regardless of length of the antisense nucleic acid, the IAP proteins may be mouse or human XIAP, HIAP1 or HIAP2. Also included are a pharmaceutical composition comprising a mammalian IAP antisense molecule and a method of enhancing apoptosis in a cell, comprising administering a negative regulator of the IAP anti-apoptotic pathway to the cell. The IAP cantisense inhibitor is useful for enhancing apoptosis in a cell in a mammal diagnosed with a proliferative disease. The method is useful for mammal diagnosed with a proliferative disease. The method is useful for treating a patient diagnosed with a proliferative disease. The method is useful for treating a patient diagnosed with a proliferative disease of the cancer. The IAP antisense molecule is useful to treat, ameliorate, improve, sustain or prevent proliferative diseases (e.g. ovarian cancer, adenocarcinoma, lymphoma, pancreatic cancer,) and also in diseases or conditions where apoptosis is involved or implicated (e.g. embryonic development, viral pathogenesis, autolimnume disorders, neurodegenerative virus, pox virus and adenovirus). The present sequence is a mouse IAP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (UYOT-)
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                            Disclosure; Fig 6; 135pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Novel antisense inhibitor enhancing apoptosis in a c proliferative diseases -
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                                       protein
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DB; ABK93874.
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AEGERA THERAPEUTICS
                                       sequence.
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591 AA;
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Query Match Best Local S Matches 502 440 354 294 322 234 262 174 202 120 142 61 82 22 سر MEDSTILSDWTNSNKQKMKYDFSCELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKV 81 EKREEEKEKQAEEMASDDLSLIRKNRMALFQQLTCVLFILDNLLKANVINKQEHDIIKQK PGESSSEDAVMMNTPVVKSALEMGFNRDLVKQTVQSKILTTGENYKTVNDIVSALLNAED 439 SELARAGFYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCPFLENSLETLRFSI 261 PWVEHAKWFPRCEFLIRMKGQEFVDEIQGRYPHLLEQLLSTSDTTGEENADP--PIIHFG AELARAGFYYIGPGDRVACFACGGKLSNWEPKDYAMSEHRRHFPHCPFLENTSETQRFSI 233 TLEHSSLFSGSYSSLSPNPLNSRAVEDISSSRTNPYSYAMSTEEARFLTYHMWPLTFLSP 201 MEKSTILSNWTKESEEKMKFDFSCELYRMSTYSAFPRGVPVSERSLARAGFYYTGVNDKV 60 PWIEHAKWFPRCEFLIRMKGQEFVDEIQARYPHLLEQLLSTSDTPGEENADPTETVVHFG -LER----GGIHSNLCSSPLNSRAVEDF-SSRMDPCSYAMSTEEARFLTYSMWPLSFLSP al Similarity 502; Conserv Conservative 81.0%; Score 2654; DB 23; 83.8%; Pred. No. 9.4e-229; tive 44; Mismatches 43; Indels 10; Gaps 379 353 293 321 173 9

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RESULT 11
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Query Match
Best Local Similarity
                                                                   Mammalian IAP homologue C (MIHC) (AAW19747) is a human homologue of baculovirus inhibitor of apoptosis protein (IAP). Its amino acid sequence was deduced from a cDNA clone (see also AAT72712) isolated from a human foetal liver cDNA library using primers based on human EST sequences that resembled the BIR repents of Orygia pseudotsuguta polyhedrosis virus IAP. IAP homologues (see also AAW19745-46 and AAW19748-52) and their derivatives and chemical analogues can be used in methods for modulating apoptosis in animal cells, specifically for treatment, by inhibition, of degenerative
                                                                                                                                                                                             Isolated protein homologues of viral inhibitors of apoptosis - used to modulate apoptosis for treatment of degenerative, infectious or autoimmune diseases and cancer
                              Sequence
                                                                                                                                                                           Claim
                                                                                                                                                                                                                                       N-PSDB;
                                                                                                                                                                                                                                                                     Vaux DL;
                                                                                                                                                                                                                                                                                                                                                    03-JUL-1997
                                                                                                                                                                                                                                                                                                                                                                                                     Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Inhibitor of apoptosis protein; IAP; mammalian IAP homologue; degenerative disease; infectious disease; autoimmune disease; cancer; therapy; diagnosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAW19747 standard;
                                                                                                                                                                                                                                                                                                             22-DEC-1995;
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                                                            infectious disease or,
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DB; AAT72712.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              sapiens.
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                                                                                                                                                                         Page 58-62; 136pp; English.
                              604 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                        OPERATIONS PTY
                                                                                                                                                                                                                                                                                                             95AU-0007275
                                                                                                                                                                                                                                                                                                                                96WO-AU00827
                                                                                                                                                                                                                                                                                                                                                                                                   /label=
556..593
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/label= BIR
255..323
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72
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 Score 2353;
Pred. No. 9
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 DB 18;
.4e-202;
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                                                             cancer
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          Length 604;
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                                                            autoimmune
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RESULT 12
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08-AUG-1995;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The human cellular inhibitor of apoptosis proteins (c-IAP1/2 - CAAP61590/T61591) comprise a series of defined structural domain crepeats and/or a RING finger domain; in particular, at least two of a first domain repeat (AAW13547 or AAW13548), a second domain repeat (AAW13549 or AAW13550), and a third domain repeat (AAW13551 or AAW13552) and/or a RING finger domain (AAW13553 or AAW13554), or a consensus crequences derived from these human genes.

The nucleic acid is used for recombinant prodn. of human cellular in the nucleic acid is used for recombinant prodn. of human cellular regulation. The nucleic acids are useful in therapies where increased cell-specific apoptosis is dealred, e.g. in restinosis; inflammatory disease states, myocardial infarction, glomerular mephritis, transplant rejection and infectious diseases, e.g. HIV.
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Best Local :
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                                                    VIKQKTQTSLQARELIDTILVKGNIAATVFRNSLQEAEAVLYEHLFVQQDIKYIPTEDVS
                                                                                                                             LNAEDEKREEEKEKQAEEMASDDLSLIRKNRMALFQQLTCVLFILDNLLKANVINKQEHD 494
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                                                                                                                                                                                                                                                                                                         ETLRESISNLSMQTHAARMRIFMYWDSSVPVQPEQLASAGFYYVGRNDDVKCFCCDGGLR 314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DKVKCFCCGLMLDNWKLGDSPIQKHKQLYPSCSFIQNLVSA-SLGSTSKNTSP--MRNSF 135
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Query Match
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Score 2353; I Pred. No. 9.46 71; Mismatches

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                                       A method has been developed of defining a set of compounds that modulate CC the expression of a target nucleic acid (tNA) sequence via binding of CC the compounds with the tNA sequence. The method comprises generating a CC library of virtual compounds in silico according to defined criteria, CC and evaluating in silico the binding of the virtual compounds with the CC tNA according to defined criteria. Also described are: (1) a method of CC defining a set of oligonucleotides (ONS) that modulate the expression of CC a tNA sequence via binding of the ONS with the tNA sequence comprising CC generating a library of virtual compounds in silico according to defined CC riteria, and evaluating in silico the binding of the virtual ONS with CC the tNA according to defined criteria; and (2) a method of defining a CC set of compounds that modulate the expression of a tNA sequence via CC set of compounds that modulate the expression of a tNA sequence via CC inding of the compounds with the tNA. The methods can be used for the CC physical, chemical or bloactive properties. Information gathered from CC assays of such compounds is used to identify nucleic acid sequences that CC are tractable to a variety of nucleotide sequence-based technologies, CC e.g. antisense drug discovery and target validation. AAZ40852 to CC AZA1220, and AAY52701 to AAY52706, represent sequences used in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Identification; genetic target; gene modulation; human; antisense oligonucleotide; phosphorothioate; target val nucleotide sequence-based technology; antisense drug di
                                                                                                                                                                                                                                                                                                                                                                                                                          Identifying compounds which modulate expression of nucleic acids, used to provide compounds having defined physical, chemical or bloactive properties, e.g. antisense activity
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N-PSDB; AAZ41005.
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28-APR-1998;
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                                exemplification of
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Wyatt JR, Bo
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PHARM INC
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98US-0067638
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                              the present invention.
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Borchers A
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AH,
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Vickers TA;
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        WPI; 1999-561046/47
N-PSDB; AAZ22096.
                                                                                                                                                             Cellular Inhibitor of c-IAP-2; prophylaxis;
                                   Bennett
                                                                       03-DEC-1998;
                                                                                       03-DEC-1998;
                                                                                                         28-SEP-1999
                                                                                                                           US5958771-A
                                                                                                                                           Homo sapiens.
                                                                                                                                                                                        Human cellular inhibitor of apoptosis-2 sequence
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                                                                                                                                                                                                                                                                                                                                            GLSLEEQLRRLQEERTCKVCMDKEVSVVFIPCGHLVVCQECAPSLRKCPICRGIIKGTVR 614
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                                                     PHARM INC
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                                   Cowsert
                                                                       98US-0205144
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                                   Ackermann
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RESULT 15
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AC AAW19
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                    DKVKCFCCGLMLDNWKLGDSPIQKHKQLYPSCSFIQNLVSA-SLGSTSKNTSP--MRNSF 135
  TFLS 618
                         DLPVEEQLRRLQEERTCKVCMDKEVSIVFIPCGHLVVCKDCAPSLRKCPICRSTIKGTVR
                                          GLSLEEQLRRLQEERTCKVCMDKEVSVVFIPCGHLVVCQECAPSLRKCPICRGIIKGTVR
                                                                     VIKOKTOTSLOARELIDTILVKGNIAATVFRNSLQEAEAVLYEHLFVQQDIKYIPTEDVS
                                                                                 IIKQKTQIPLQARELIDTILVKGNAAANIFKNCLKEIDSTLYKNLFVDKNMKYLPTEDVS
                                                                                                                LNAEDEKREEEKEKQAEEMASDDLSLIRKNRMALFQQLTCYLFILDNLLKANVINKQEHD
                                                                                                                                                             IIHFGPGESSSEDAVMMNTPVVKSALEMGFNRDLVKQTVQSKILITGENYKTVNDIVSAL
                                                                                                                                                                                                                                                                    ETLRESISNLSMQTHAARMRTEMYWPSSVPVQPEQLASAGFYYVGRNDDVKCFCCDGGLR
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    71.8%; ilarity 72.8%; Conservative 7
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Pred.
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No. 9.
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).4e-202;
les 87;
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                                                                                                                                                                                                                      Human XIAP, HIAP-1 and HIAP-2 and murine M-XIAP, M-HIAP-1 and M-HIAP-2 (AAMI9581-86) are a new class of mammailan proteins that are inhibitors of apoptosis (IAP) and which are characterised by the presence of a ring zinc finger domain (see also AAMI9587) and at least one BIR (baculovirus IAP repeat) domain (see also AAWI9588). The HIAP amino acid sequences were deduced from cDNA clones (AAT70837) and AAT70838) from a human liver library. IAP polypeptides can be expressed in host cells (in vitro or in vivo) and used in methods for treating diseases and disorders involving apoptosis, esp. in a neurodegenerative disease, a myelodysplastic syndrome or an ischaemic injury, seleted from myocardial infairction, stroke,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Apoptosis inhibitor; HIAP-1; HIV; AIDS; neurodegeneration; myelodysplastic syndrome; ischaemia; myocardial infarction; streperfusion injury; toxin-induced liver disease; gene therapy;
                                                                                                                                                                                                                                                                                                                                                                                                      Nucleic acid encoding an inhibitor of apoptosss polypeptide - used to inhibit apoptosis in e.g. HTV or AIDS patients, and for detection of susceptibility to apoptotic disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                          N-PSDB;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Domain
                                                                                                                                                                                                                                                                                                                                                                                   Claim 27; Page 72-74; 219pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Baird S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           22-DEC-1995;
04-AUG-1995;
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                                               62
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                                                                                           1997-154262/14.
DB; AAT70837.
HSLLPGTENSGYFRGSYSNSPSNPVNSRANQEFSALMRSSYPCPMNNENARLLTFQTWPL
           HSLSPTLEHSSLFSGSYSSLSPNPLNSRAVEDISSSRTNPYSYAMSTEEARFLTYHMWPL
                                                                                                                                            435;
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                                                                                                                                           Conservative ·
                                                                                                                                                                                                                injury,
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95US-0511485
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546..591
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72.18;
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                                                                                                                                          Score 2332; DB 18;
Pred. No. 7.2e-200;
2; Mismatches 92;
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FLS
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                                                            LSLEEQLRRLQEERTCKYCMDKEVSVVFIPCGHLVVCQECAPSLRKCPICRGIIKGTVRT
                                                                                                                                               NAEDEKREEEKEKQAEEMASDDLSLIRKNRMALFQQLTCYLPILDNLLKANVINKQEHDI
                                                                                                                                                                                                          IHFGPGESSSEDAVMMNTPVVKKSALEMGFNRDLVKQTVQSKILTTGENYKTVNDIVSALL
                                                 LPVEEQLRRLPEERTCKVCMDKEVSIVFIPCGHLVVCKDCAPSLRKCPICRSTIKGTVRT
                                                                                                           IKQKTQIPLQARELIDTILVKGNAAANIFKNCLKEIDSTLYKNLFVDKNMKYIPTEDVSG
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Search completed: May 5, 2003, 16:01:57 Job time: 123.749 secs

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GenCore version 5.1.4_p5_4578 Copyright (c) 1993 - 2003 Compugen Ltd.
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OM protein protein search, using sw model

Run on: мау 5 2003, 15:58:42; Search time 67.6382 Seconds
(without alignments)
878.365 Million cell updates/sec

Title: Perfect score: US-08-569-749-2 3277

Sequence: MHKTASQRLFPGPSYQNIKS.....LRKCPICRGIIKGTVRTFLS 618

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 283224 seqs, 96134422 residues

Total number of hits satisfying chosen parameters: 283224

Minimum DB Maximum DB seg length: 0 seg length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

PIR_73:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:* pir1:*
pir2:*
pir3:*
pir4:*

Database

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	0 00	7	6	ر. ن	4	ω	2		No.	Result
142	144	146	152	152	156	161	165	169	175.5	181.5	186.5	194	•	235.5	237.5	240	460.5	461	463	468	513	513	723.5	737	908	1532	2332	3247	Score	
4.3	4.4	4.5	4.6	4.6	4.8		5.0	٠	•	5.5				7.2	7.2	7.3	14.1	14.1	14.1	14.3	15.7	15.7	22.1	22.5	.7	46.8	71.2		Match 1	Query
249	249	870	304	234	823	155	943	150	208	711	316	4845	275	286	997	292	298	275	1232	1447	268	268	496	497	497	358	604	618	Length 1	
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IAP2 orf71 - Bomby	CO:		hypothetical prote	probable apoptosis	protein F15K9.3 [i	apoptosis inhibito	rngB protein, cyto	ORF MSV248 probabl	ס		othetica	BIR repeat contain	sis-inhibi	3 protéin		IAP1 orf27 - Bomby	kidney inhibitor o	inhibitor-of-apopt			-in	_	•	œ,				s inhib	Description	

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61 61

PVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKLGDSPIQKHKQLYPSCSFIQNLVSAS 120

PVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKLGDSPIQKHKQLYPSCSFIQNLVSAS

120

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STSDTTGEENADPPIIHFGPGESSSEDAVMMNTPVVKSALEMGFNRDLVKQTVQSKILTT 420

STSDTTGEENADPPIIHFGPGESSSEDAVMMNTPVVKSALEMGFNRDLVKQTVLSKILTT

NDDVKCFCCDGGLRCWESGDDPWVEHAKWFPRCEFLIRMKGQEFVDEIQGRYPHLLEQLL 360

NDDVKCFGCDGGLRCWESGDDPWVEHAKWFPRCEFLIRMKGQEFVDEIQGRYPHLLEQLL

360

RRHFPNCPFLENSLETLRFSISNLSMQTHAARMRTFMYWPSSVPVQPEQLASAGFYYVGR RRHFPNCPFLENSLETLRFSISNLSMQTHAARMRTFMYWPSSVPVQPEQLASAGFYYVGR 300

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361 361 301 301 241 241 181 181

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2364 708	145 383 433	329 347 1639	899 308 115	236 614 864	785 372
22	222	N N N	N N N	202	NN
I40884 T00064	S77736 F96582 JC7678	T28403 T01044 T50119	D96594 T37474 B96664	T10343 S42526 T01393	T00474 C96631
cytotoxin L - Clos hypothetical prote	probable zinc fing hypothetical prote RING finger protei	ORF MSV242 probabl hypothetical prote probable sensory t	unknown protein, 7 apoptosis inhibito probable RING zinc	inhibitor of apopt finger protein unk apoptosis inhibito	hypothetical prote

ALIGNMENTS

Qy 1 MHKTASQRLFPGPSYQNIKSIMEDSTILSDWTNSNKQKMKYDFSCELYRMSTYSTFPAGV 60 	Query Match 99.1%; Score 3247; DB 2; Length 615; Best Local Similarity 99.4%; Pred. No. 8.8e-217; Matches 614; Conservative 0; Mismatches 4; Indels 0; Gaps 0;	A;Description: apoptotic suppressor A;Description: Apoptotic suppressor C;Superfamily: RING finger homology C;Keywords: apoptosis; zinc finger F;567-611/Domain: RING finger homology <rng></rng>	A;Status: nucleic acid sequence not shown A;Nolecule type; mRNA A;Residues: 1-618 <lis> A;Cross-references: EMBL:U45879; NID:gl184317; PIDN:AAC50372.1; FID:gl184318 C:Punction</lis>	Nature 379, 349-353, 1996 A;Title: Suppression of apoptosis in mammalian cells by NAIP and a related family of A;Reference number: A58182; MUID:96149249; PMID:8552191 A;Accession: S68450	<pre>C;Decres: nome septems (men) C;Date: 17-Jull-1998 #sequence_revision 17-Jul-1998 #text_cha::ge 21-Jul-2000 C;Accession: S68450 R;Liston, P.; Roy, N.; Tamai, K.; Lefebvre, C.; Baird, S.; Cherton-Horvat, G.; F</pre>
			318	d family of	00 . G.; Farah

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C;Superfamily: RING finger homology
C;Keywords: apoptosis; zinc finger
F;553-597/Domain: RING finger homolo
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A;Title: Suppression of apoptosis in mammalian cells by NAIP and a related family of IA A;Reference number: A58182; MUID:96149249; PMID:8552191
A;Accession: S68449
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C;Date: 17-Jul-1998 #sequence_revision 17-Jul-1998 #text_change 21-Jul-2000
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A; Residues: 1-604 <LIS>
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C; Species: Homo sapiens (man)
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               NAEDEKREEEKEKQAEEMASDDLSLIRKNRMALFQQLTCVLPILDNLLKANVINKQEHDI
                                                                     IHFGPGESSSEDAVMMNTPVVKSALEMGFNRDLVKQTVQSKILTTGENYKTVNDIVSALL
                                                                                                                 WESGDDPWVQHAKWFPRCEYLIRIKGQEFIRQVQASYPHLLEQLLSTSDSPGDENAESSI
                                                                                                                                                                               TSRYTVSNLSMQTHAARFKTFFNWPSSVLVNPEQLASAGFYYVGNSDDVKCFCCDGGLRC
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                                             THLEPGEDHSEDAIMMNTPVINAAVEMGFSRSLVKQTVQRKILATGENYRLVNDLVLDLL
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Similarity
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finger homology <RNG>
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72; Mismatches
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Blochem. Blophys. Res. Commun. 243, 827-832, 1998
A;Title: Cytokine induced expression of porcine inhibitor
A;Reference number: JC5964; MUID:98162622; PMID:9501011
A;Accession: JC5964
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-358 <STE>
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C;Superfamily: RING finger homology
F;307-351/Domain: RING finger homology <RRN>
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Best Local Similarity
Matches 286; Conserv
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;Date: 04-Sep-1998 #sequence_revision 04-Sep-1998 #text_change
;Accession: JC5964
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                            RKCPICRGIIKGTVRTFLS 618
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                                                                                                               DSLLIARVISEQEHDVIKQKTQTSLQARELIDIILVKGNYAATIFKNSLQEIDPMLYKHL
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65.1%; Pred. No. 1
 358
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S69544 apoptosis

inhibitor IAP

homolog -

human

TVRTFLS

618

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C;Species: Homo sapiens (man)
C;Date: 06-Dec:1996 #sequence_revision 13-Mar-1997 #text_change 17-Nov-2000
C;Accession: S69544; S68451
R;Duckett, C.S.; Nava, V.E.; Gedrich, R.W.; Clem, R.J.; van Dongen, J.L.; Gilfillan, EMBO J. 15, 2685-2694, 1996
A;Title: A conserved family of cellular genes related to the baculovirus iap gene and A;Reference number: S69544; MUID:96256286; PMID:8654366
A;Accession: S69544
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A; Gene: 11p
C; Function:
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C;Superfamily: apoptosis inhibitor IAP homolog;
C;Keywords: apoptosis; zinc finger
F;446-490/Domain: RING finger homology <RRN>
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A;Title: Suppression of apoptosis in mammalian cells by NAIP and a related fa A;Reference number: A58182; MUID:96149249; PMID:8552191
A;Accession: $68451
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A;Residues: 1-161,'C',163-422,'Q',424-497 <LIS>
A;Cross-references: EMBL:U45880; NID:g1184319; PIFN:AAC50373.1;
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A; Residues: 1-497 < DUC>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | | | : :|| :|| :|| | | ::| : || | | ::| | | | | : | : | | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :| | :|
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05; Conservative
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R;Duckett, C.S.; Nava, V.B.; Gedrich, R.W.; Clem, R.J.; van Longen, J.L.; Gilfillan, EMBO J. 15, 2685-2694, 1996
A;Title: A conserved family of cellular genes related to the baculovirus iap gene an A;Reference number: S69544; MUID:96256286; PMID:8654366
A;Accession: S69545
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S69545
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C;Superfamily: apo
F;446-490/Domain:
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C;Genetics:
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CKVCLDEEVGVVFLPCGHLATCNQCAPSVANCPMCRADIKGFVRTFLS
                                 CKVCMDKEVSVVFIPCGHLVVCQECAPSLRKCPICRGIIKGTVRTFLS 618
                                                                                                            DTILYKGNAANIFKNCLKEIDSTLYKNLFVDKNMKYIPTEDVSGLSLEEQLRKLQEERT 570
                                                                                                                                                   DAGAGADWRCASREPSAPF ---- IEPCQATTSKA----
                                                                                                                                                                                     EEMASDDLSLIRKNRMALFQQLTCVLPILDNLLKANVINKQEHDIIKQKTQIPLQARELI
                                                                                                                                                                                                                              DEAP-AKEALALGIDGGVVRNAIQRKLLSSGCAFSTLDELLHDIFD-
                                                                                                                                                                                                                                                              MNTPVVKSALEMGFNRDLVKQTVQSKILTTGENYKTVNDIVSALLNAEDEKREEEKEKQA 450
                                                                                                                                                                                                                                                                                                       PKCQFVLLAKGPSYVSEVLA - -
                                                                                                                                                                                                                                                                                                                                           PRCEFLIRMKGQEFVDEIQGRYPHLLEQLLSTSDTTGEENADPPIIHFGPGESSSEDAVM 390
                                                                                                                                                                                                                                                                                                                                                                                RLRTFTDWPIS-NIQPASALAQAGLYYQKIGDQVRCFHCNIGLRSWQKEDEPWFEHAKWS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KLSNWEPKDDAMSEHRRHFPNCPFLE-----NSLETLRFSISNLSMQTH----AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VVDSPESCSCP---DLLLEANRLYTFKDWPNPNITPQALAKAGFYYLNRLDHVKCVWCNG
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Pred. No. 3.2e-43;
2; Mismatches 212;
                                                                          --ITDEIQKMSVATPNGNLSLEEENRQLKDARL
                                                                                                                                                                                                                                                                                                       TTAANASSPPAT - - APAPTLQADVLM
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RESULT S68452

σ

apoptosis

inhibitor

diap •

fruit

fly

(Drosophila

melanogaster)

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A;Description: apoptotic suppressor
C;Superfamily: apoptosis inhibitor IAP homolog;
C;Keywords: apoptosis; zinc finger
F;445-489/Domain: RING finger homology <RNG>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C;Date: 17-Jul-1998 #sequence_revision 17-Jul-1998 #text_change 17-Nov-2000 C;Accession: S68452; S78528 R;Liston, P; Roy, N.; Tamai, K.; Lefebvre, C.; Baird, S.; Cherton-Horvat, G Nature 379, 349-353, 1996 A;Title: Suppression of apoptosis in mammalian cells by NAIP and a related f A;Reference number: A58182; MUID:96149249; PMID:8552191 A;Accession: S68452
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A;Residues: 1-36,'AT',37,'K',39,'L',41-44,'H',46-58,'Q',60-412,'A',414-427,'A',429-496
A;Croos-references: EMBL:U45881; NID:g1184313; PIDN:AAC46988.1; PID:g1184314
C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         submitted to the EMBL Data Library, A; Reference number: S78528 A; Accession: S78528
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Molecule type: mRNA
A; Residues: 1-496 <LIS>
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Best Local S
Matches 180
                                                                                                                                              375
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                      RTCKVCMDKEVSVVFIPCGHLVVCQECAPSLRKCPICRGIIKG?VRTFLS
                                                                                                                                                                                                                                         MNTPVVKSALEMGFNRDLVKQTVQSKILTTGENYKTVNDIVSALLNAEDEKREEEKEKQA
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                                                                                                                                                                                                                                                                                                                                                                                                                                 VIAKWEKNDNAFEEHKRFFPQCPRVQMGPLIEFATGKNLDELGIQPTTLPLRPKYACVDA
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RLCKVCLDEEVGVVFLPCGHLATCNQCAPSVANCPMCRADIKGFVRTFLS
                                                                                                      LIDTILVKGNAAANIFKNCLKEIDSTLYKNLEVDKNMKYIPTEDVSGLSLEEQLRRLQEE
                                                                                                                                            EPSA----PFIEPCQATTSKAASVPIPVADS
                                                                                                                                                                          EEMASDDLSLIRKNRMALFQQLTCVLPILDNLLKANVINKQEHDIIKQKTQIPL--QARE
                                                                                                                                                                                                               DEAP-AKEALTLGIDGGVVRNAIQRKLLSSGCAFSTLDELLHDIFDDAGAGAALEVREPP
                                                                                                                                                                                                                                                                                                                    PRCEFLIRMKGQEFVDEIQGRYPHLLEQLLSTSDTTGEENADPPIIHFGPGESSSEDAVM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KLSNWEPKDDAMSEHRRHFPNCPFLE-----NSLETIRFSISNLSMQTH----AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VVDSPESCSCP----DLLLEANRLVTFKDWPNPNITPQALAKAGFYYLNRLDHVKCVWCNG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LYPSCSFIQNLVSASLGSTSKNTSPMRNSFAHSLSPTLEHSSLFSGSYSSLSPNPLNSRA
                                                                                                                                                                                                                                                                                      PKCQFVLLAKGPAYVSEV--
                                                                                                                                                                                                                                                                                                                                                          RLRTFTDWPIS-NIQPASALAQAGLYYQKIGDQVRCFHCNIGLRSWQKEDEPWFEHAKWS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 723.5; DB 2; Pred. No. 2.8e-43;
                                                                                                                                                                                                                                                                                     ----LAT--TAANASSQ!'AT---APAPTLQADVLM
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                                                                       -- ITDEIQKMSVSTINGNLSLEEENRQLKDA
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Virology 229, 381-399, 1997
A;Title: The sequence of the Orgyia pseudotsugata A;Reference number: Z17011; MUID:97271300; PMID:91
A;Accession: T10304
A;Status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          inhibitor of apoptosis protein 3 - Orgyia pseudotsugata nuclear polyhedrosis C;Species: Orgyia pseudotsugata nuclear polyhedrosis virus, OpMNPV C;Date: 16-Jul-1999 #sequence_revision 16-Jul-1999 #text_change 15-Sep-2000 C;Accession: T10304 R;Ahrens, C.A.; Russell, R.R.; Funk, C.J.; Evans, J.; Harwood, S.; Rohrmann,
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A; Residues: 1-268 < AHR>
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GKCAAGVTTCPVCRGQLDKAVRMY
                                QECAPSLRKCPICRGIIKGTVRTF
                                                                                                                                                                     TCVLPILDNLLKANVINKQEHDIIKQKTQIPLQARELIDTILVKGNAAANIFKNCLKEID
                                                                                                                                                                                                                                        VQSKILTTGENYKTVNDIVSALLNAEDEKREEEKEKQAEEMASDDLSLIRKNRMALFQQL
                                                                                                                                                                                                                                                                                                                                                                                                                RRHFPNCPFLENSLE-----TLRFSISNLSMQTHAARMRTFMYWPSSVPVQPEQLAS 292
                                                                                                    STLYKNLEVDKNMKYIPTEDVSGLSLEEQLRRLQEERTCKVCMDKEVSVYFIPCGHLVVC
                                                                                                                                                                                                                                                                                                         PHILEQILSTSDTTGEENADPPIIHFGPGESSSEDAVMMNTPVVKSALEMGFNRDLVKQT
                                                                                                                                                                                                                                                                                                                                                                              AGFYYVGRNDDVKCFCCDGGLRCWESGDDPWVEHAKWFPRCEFLIRMKGQEFVDEIQGRY
                                                                                                                                                                                                                                                                                                                                             AGFFYTGQGDKTRCFCCDGGLKDWEPDDAPWQQHARWYDRCEYYLLYKGRDFVQR-----
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24.1%;
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                                                                                                                                                                                                           -DADNEPHIERPAVEAE
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Pred. No. 4.2e-28;
1; Mismatches 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           from GB/EMBL/DDBJ
                                  616
                                                                    VADDRLCKICLGAEKTVCFVPCGHVVAC
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PMID:9126251
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RESULT 8 A53989

apoptosis-inhibiting protein - Orgyia pseudotsugata multicapsid nuclear polyhedrosis c;Species: Orgyia pseudotsugata multicapsid nuclear polyhedrosis virus, OpMNPV C;Date: 15-Oct-1994 #sequence_revision 15-Oct-1994 #text_change 15-Sep-2000 C;Accession: A53989 R;Birnbaum, M.J.; Clem, R.J.; Miller, L.K.
J. Virol. 68, 2521-2528, 1994
A;Title: An apoptosis-inhibiting gene from a nuclear polyhedrosis virus encoding a po A;Reference number: A53989; MUID:94187094; PMID:8139034
A;Rocession: A53989
A;Status: preliminary A;Mocession: A53989 A;Status: preliminary A;Mocession: A53989 A;Status: 1-268 <BIR> DRA A;Cross-references: GB:L22564; NID:9456111; PIDN:AAB02610.1; PID:9456114
A;Cross-references: GB:L22564; NID:9456111; PIDN:AAB02610.1; PID:9456114
A;Note: authors translated the codon TGG foor residue 28 as Tyr, GAC for residue 50 as C;Superfamily: viral apoptosis inhibitor IAP; RING finger homology F;217-261/Domain: RING finger homology <RRN>

RESULT

C:Genetics: A;Gene: Naip2 Query Match Query Match Best Local Similarity 25.9%; Pred. No. 6.5e-24; Best Local Similarity 25.9%; Pred. No. 6.5e-24; Matches 147; Conservative 73; Mismatches 213; Indels 134; Gaps 19; Qy 21 IMEDSTILSDWTNSNKOKMKYDFSCELYRMSTYSTFPAGVPVSER 65 :	 Db 199	Query Match 15.7%; Score 513; DB 2; Length 268; Best Local Similarity 24.1%; Pred. No. 4.2e-28; Matches 107; Conservative 51; Mismatches 86; Indels 200; Gaps 4; Qy 181 MSTEEARFLTYHMWPLTFLSPSELARAGFYYIGPGDRVACFACGGKLSNWEPKDDAMSEH 240
Query Match Query Match Query Match Best Local Similarity 25.4%; Pred. No. 1.1e-23; Matches 156; Conservative 90; Mismatches 221; Indels 146; Gaps 23; Matches 156; Conservative 90; Mismatches 221; Indels 146; Gaps 23; Qy Qy Qy RIVERCELLINGKENTOFSCELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDK 80 :	IIKQKTQIPLQARELIDTILVKGNAAA 521 :	QY 244 FPNCPFLEN-SLETLRFSISNLSMQTHAA

523	4 NRMALFQQLTCVLPILDNLLKANVINKQEHDIIKQKTQIPLQARELIDTILVKGNAAANI	Оу 46	_
223	7EKEPQVE	Db 21	н
463	4 FURDLVKQTVQSKILTTGENYKTVNDIVSALLNAEDEKREEEKEKQAEEMASDDLSLIRK	Qy 40	_
403 216	5 VDEIQGRYPHLLEQLLSTSDTTGEENADPFIIHFGPGESSS-EDAVMMNTPVVKSALEMG ::	Qy 34 Db 18	- 0
344 183	5 VQPEQLASAGFYYVGRNDDVKCFCCDGGLRCWESGDDPWVEHAKWFPRCEFLIRMKGQEF : : : : : : : : : :	Qy 28 Db 12	- 0
284 `	4 FPNCPFLENSLETLRFSISNLSMQTHAARMRTFMYWPSSVP	Qy 24 Db 6	н о
243 .	4 EEARFLIYHMWPLTFLSPSELARAGFYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRH	Qу 18 Db	- 0
9;	Match 14.1%; Score 461; DB 2; Length 275; Local Similarity 22.6%; Pred. No. 1.7e-24; Local Similarity 62; Mismatches 84; Indels 206; Gaps	Query M Best Lo Matches	
15)	reliminary reliminary trype: DNA 1-275 <cro> erences: GB:L05494; NID:g289583; PIDN:AAA43835.1; PID:g28958 uence extracted from NCBI backbone (NCBIN:127014, NCBIP:1270 1y: viral apoptosis inhibitor IAP; RING finger homology</cro>	A;Status: pa A;Molecule 1 A;Residues: A;Cross-refa A;Note: sequ C;Superfami	
ke motif.	E.; Clem, R.J.; Miller, L.K. 7, 2168-2174, 1993 apoptosis-inhibiting baculovirus gene with a zinc finger-li number: A45679; MUID:93188168; PMID:8445726	R;Crook, N. J. Virol. 6 A;Title: An A;Reference	ותים על וכל אי
irus CpGV 2000	ESULT 11 45679 nhibitor-of-apoptosis polypeptide (IAP) - Cydia pomonella granulosis v. Species: Cydia pomonella granulosis virus CpGV Date: 21-Sep-1993 #sequence_revision 25-Apr-1997 #text_change 15-Sep-;Accession: A45679	RESULT 11 A45679 inhibitor C; Species C; Date: 21 C; Accessic	000+227
	94 ETILEIQAFPFYN 606	Db 59	_
	6 NCLKEID	Оу 52	_
525 593	5ANVINKQEHDIIKQKTQIPLQARELIDTILVKGNAAANIFK	Oy 48	
533	S GKTVLLK-KIAFLWASGCCPLLNREQLVFYLSLSSTRPDEGLASIICDQLLEKEGSVTEM	Db 47	
474	5 SFRHMSLLDISSDLATDHLLGCDLSIASKHISKPVQEPLVLPEVFGNLNSVMCVEGEAGS	41	
439	6VKSALEMGFNRDLVKQTVQSKILTTGENYKTVNDIVSALLNAED	Ωу 39	_
395 . 414	6 DEIQGRYPHLLEQLLSTSDTTGEENADPPIIHFGDGESS-SEDAVMUNTPV ::	Qy 34 Db 35	
345 355	7 PEQLASAGFYYVGRNDDVKCFCCDGGLTCWESGDDPWYSHAKWFPTCEFLITNKGQ-EFV	Qy 28 Db 29	
286 295	6 TLRESISHAARMRTEMYWDSSVPVQ :	Qy 25 Db 23	

	RESULT 13 T41772 IAP1 orf27 - Bombyx mori nuclear polyhedrosis virus (isolate T3)
	Qy 601 KCPICRGIIKGTVRTFLS 618
	Qy 541 VDKNMKYIPTEDVSGLSLEEQLRRLQEERTCKVCMDKEVSVVFIPCGHLVVCQECAPSLR 600 :
	Qy 481 NLLKANVINKQEHDIIKQKTQIPLQARELIDTILVKGNAAANIFKNCLKELDSTLYKNLF 540 : : : : Db 221
	QY 421 GENYKTVNDIVSALLNAEDEKREEEKEKQAEEMASDDLSLIRKNRMALFQQLTCYLPILD 480 Db 204
	Qy 361 STSDTTGEENADPPIIHFGPGESSSEDAVMMNTPVVKSALEMGFNRDLVKQTVQSKILTT 420 :
	Qy 301 NDDVKCFCCDGGLRCWESGDDFWVEHAKWFPRCEFLIRMKGQEFVDEIQGRYPHLLEQLL 360
	Qy 248PFLENSLETLRFSISNLSMQTHAARMRTFMYWPSSVPVQPEQLASAGEYYVGR 300
	Qy 212 IGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFP
13;	Query Match 14.1%; Score 460.5; DB 2; Length 298; Best Local Similarity 28.8%; Pred. No. 2.1e-24; Matches 126; Conservative 36; Mismatches 105; Indels 171; Gaps
	C;Genetics: A;Gene: kiap A;Map position: 20q13.3 C;Keywords: apoptosis
family, F	R;Lin, J.H.; Deng, G.; Huang, Q.; Morser, J. Biochem. Biophys. Res. Commun. 279, 820-831, 2000 A;Title: KIAP, a novel member of the inhibitor of apoptosis protein family. A;Reference number: JC7568; MUID: 21092523; PMID:11162435 A;Contents: Fetal kidney A;Contents: Fetal kidney A;Molecule type: mRNA A;Residues: 1-298 <lin> C;Comment: This protein, a new member of the inhibitor of apoptosis protein</lin>
	RESULT 12 JC7568 kidney inhibitor of apoptosis protein – human C; Species: Homo sapiens (man) C; Date: 30-Jun-2001 #sequence_revision 30-Jun-2001 #text_charge 30-Jun-2001 C; Accession: JC7568
	QY 584 IPCGHLVVCQECAPSLRKCPICRGIIKGTVRTFLS 618
	224
	Db. 224 223

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C;Species: Schizosaccharomyces pombe
C;Date: 21-Jan-2000 #sequence_revision 21-Jan-2000
C;Accesion: T43523; T41649; T41700
R;Morishita, J; Matsusaka, T; Yanagida, M.
submitted to the EMBL Data Library, August 1999
A;Description: Fission yeast cutl7 is required for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           R;Gomi, S.; Majima, K.; Maeda, S.
J. Gen. Virol. 80, 1323-1337, 1999
A;Title: Sequence analysis of the genome of Bombyx mori nucleopolyhedrovirus A;Reference number: Z22020; MUID:99281911; PMID:10355780
A;Accession: T41772
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A;Variety: isolate T3
C;Date: 03-Dec-1999 #sequence_revision 03-Dec-1999 #text_change 15-Sep-2000
C;Accession: T41772
A;Cross-references: EMBL:AB031034; PIDN:BAA83415.1
R;Harris, D.; Wood, V.; Rajandream, M.A.; Barrell,
submitted to the EMBL Data Library, August 1998
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C; Superfamily: viral apoptosis inhibitor IAP; RING finger homology
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A; Residues: 1-292 <KAM>
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A; Accession: T43523
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                                                            A; Residues:
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                                                                                                    A; Status: translated from
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18.0%;
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Pred. No. 3.7e-09;
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orf13 protein - Autographa californica nuclear polyhedrosis virus C; Species: Autographa californica nuclear polyhedrosis virus, AcMNPV C; C; Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_charge 17-Nov-2000 C; Accession: D36828; C72853 R; Braunagel, S.C.; Daniel, K.D.; Reilly, L.M.; Guarino, L.A.: Hong, T.; Summ Virology 191, 1003-1008, 1992 A; Title: Sequence, genomic organization of the EcoRI-A fragment of Autograph vps of vertical control of the control o
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                                                             A; Molecule type: DNA
A; Residues: 1-286 <BRA>
                                                                                                                                                           A; Reference number: A; Accession: D36828
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A; Residues: 932-997
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A; Residues: 1-99
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A;Status: translated
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;Cross-references:
;Ayres, M.D.; Howai
                                                                                                                           Status: preliminary
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Pred. No. 3.3e-08;
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C;Genetics:
A;Gene: Ac-IAP1
C;Superfamily: viral apoptosis inhibitor IAP; RING finger homology
Search completed: May 5, 2003, 16:08:04 Job time: 71.6382 secs
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A;Tittle: The complete DNA sequence of Autographa californica nuclear polyhedrosis virus.
A;Reference number: A72850; MUID:94303173; PMID:8030224
A;Accession: C72853
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A;Molecule type: DNA
A;Residues: 1-199,'L',201-286 <AYR>
A;Cross-references: GB:L22858; NID:g510708; PIDN:AAA66657.1; PID:g559096
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                                                                                                                          173 RTNPYSYAMSTEEARFLTYHMWPL---TFLSPSELARAGFYYIGPGDRYACFACGGKLSN 229
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Title:
Perfect score:
Sequence:
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      Searched:
                                                               Scoring table:
                                        BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                              May 5, 2003, 15:51:32; Search time 25.6313 Seconds (without alignments) 1000.040 Million cell updates/sec
112892 seqs, 41476328 residues
                                                                                             US-08-569-749-2
3277
1 MHKTASQRLEPGPSYQNIKS.....LFKCPICRGIIKGTVRTFLS 618
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Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Total number of hits satisfying chosen parameters:

112892

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database : SwissProt_40:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	æ	7	o,	_G	4	ω	N	_		Kesuit	1
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ALIGNMENTS

WITH THE RECEPTOR ASSOCIATED FACTORS 1 AND 2 (TRAF1 AND TRAF2) TO FORM AN HETEROMERIC COMPLEX, WHICH IS THEN RECRUITED TO THE TUMOR NECROSIS FACTOR RECEPTOR 2 (TNFR2).	ននន	
at. Struct. Biol. 6:648-651(1999). 1- FUNCTION: APOPTOTIC SUPPRESSOR. THE BIR MOTIFS REGION INTERACT.		
Hinds M.G., Norton R.S., Vaux D.L., Day C.L.; "Solution structure of a baculoviral inhibitor of apoptosis (IAP) resear ".	RT .	
LINE-99332054; PubMed		
TISSUE=Uterus; Strausberg R.;		
SEQUENCE FROM N.A.		
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<pre>to inhibit apoptosis and/or bind tumor -associated factors.";</pre>	Ŗ Ŗ	
and expression of apoptosis inhib		
SEQUENCE FROM N.A. TISSUE-Fetal liver;		
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Nature 379:349-353(1996).		
"Suppression of apoptosis in mammalian cells by NAIP and a related family of TAP genes ".	3 23 3	
Tamai K., Lefebvre C., Baird S., Chert		
TISSUE-Liver; MEDLINE-96149249; PubMed-8552191;	X 7	
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[2]		
of apoptosis proteins		
g complex contains two	R 3	
NE=96128127; PubMed=8548810;		
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Eukaryota; Metazoa; Chordata; Cranlata; Vertebrata; Euteleostomi; Mammalia: Eutheria: Primates: Catarrhini: Hominidae; Homo.		
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BIRC3 OR API2 OR IAP2 OR MIHB.		
(HIAP2) (HIAP-2) (C-IAPI) (TNFR2-TRAF signaling		
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BL; U45879; AAC50372.1; -.
BL; U37547; AAC50508.1; -.
BL; BC016174; AAH16174.1; -.
B; 10BH; 20-0CT-99.
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SIMILARITY: BELONGS TO THE IAP FAMILY.
SIMILARITY: CONTAINS 3 BIR REPEATS.
SIMILARITY: CONTAINS 1 CARD DOMAIN.
SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
DATABASE: NAME-Atlas Genet. Cytogenet. Oncol. Haematol.;
WWW-"http://www.infobiogen.fr/services/chromcancer/Genes/BIRC3ID239.html".
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                                                                              LGSTSKNTSPMRNSFAHSLSPTLEHSSLFSGSYSSLSPNPLNSRAVEDISSSRTNPYSYA
                                                                                                                                                                  PVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKLGDSPIQKIKQLYPSCSFIQNLVSAS
                     MSTEEARFLTYHMWPLTFLSPSELARAGFYYIGPGDRVACFACGGKLSNWEPKDDAMSEH
                                                                                                                                           PVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKLGDSPIQKHKQLYPSCSFIQNLVSAS
LGSTSKNTSPMRNSFAHSLSPTLEHSSLFSGSYSSLSPNPLNSRAVEDISSSRTNPYSYA
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0; Mismatches
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062210; 008864; 01-NOV-1997 (Rel. 35, Created) 01-NOV-1997 (Rel. 35, Last sequence update) 01-NOV-1997 (Rel. 35, Last sequence update) 15-JUN-2002 (Rel. 41, Last annotation update) Baculoviral IAP repeat-containing protein 3 (protein 2) (MIAP-2) (MIAP-2).
                                                                                                                                                                                                                                                      MEDLINE=96128127; PubMed=8548810; Rothe M., Pan M.-G., Henzel W.J., Ayres T.M., Goeddel D.V.; Rothe M., Pan M.-G., Henzel W.J., Ayres T.M., Goeddel D.V.; The TNFR2-TRAF signaling complex contains two novel proteins to baculoviral inhibitor of apoptosis proteins."; Cell 83:1243-1252(1995).
                                                                                                                                                                    SEQUENCE FROM N.A.
TISSUE-Skeletal muscle;
MEDLINE-98110590; PubMed-9441758;
Liston P., Lefebvre C., Fong W.G., Xuan J.Y., Korneluk
"Genomic characterization of the mouse inhibitor of apo
l and 2 genes.";
                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Rodentia; CBI_TaxID=10090;
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EMBL; U88909; AAC53532.1; -.
HSSP; 013490; 10BH.
MGD; MG1:1197009; Birc3.
InterPro; IPR001370; BIR.
InterPro; IPR001315; CARD.
InterPro; IPR001315; CARD.
InterPro; IPR001315; CARD.
InterPro; IPR001315; CARD;
InterPro; IPR00184; Znf ring,
Pfam; PF006097; zf C3HC4; 1.
Pfam; PF00619; CARD; 1.
Pfam; PF00639; BIR; 3.
SMART; SM00184; CARD; 1.
SMART; SM00184; RING; 1.
SMART; SM00184; ZF_RING_1; FALS;
PROSITE; PS00518; ZF_RING_2; 1.
ADDODEDGIS; Z55089; ZF_RING_2; 1.
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                                       TTGENYKTVNDIVSALLNAEDEKREEEKEKQAEEMASDDLSLI!KNRMALFQQLTCYLPI
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SEQUENCE OF 362-441 FROM N.A.

REPLINE=20519161; PubMed=11066071;

RA MEDLINE=20519161; PubMed=11066071;

RA MEDLINE=20519161; PubMed=11066071;

RA MEDLINE=20519161; PubMed=11066071;

RA MEDLINE=20519161; PubMed=1106071;

RET Genes M., Steyls A., Dierlamm J., De Wolf-Peeters C., Marynen P.;

RT genomic breakpoint junctions in the t(11;18)(q21;q21) of marginal zongenomic breakpoint junctions in the t(11;18)(q21;q21) of marginal zongenomic scance Type.";

RT Genes Chromosomes Cancer 29:281-291(2000).

RL Genes Chromosomes Chromosomes Canc
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BIR2_HUMAN
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Q13489; Q16628; 99UP46; Q9Hc27;

Q1-NQV-1997 (Rel. 35, Created)

O1-NQV-1997 (Rel. 35, Last sequence update)

15-JUN-2002 (Rel. 41, Last annotation update)

15-JUN-2002 (Rel. 41, Last annotation update)

Baculoviral IAP repeat-containing protein 1 (Inhibi protein 1) (HIAP1) (HIAP-1) (C-IAP2) (TNFR2-TRAF 51 protein 1) (IAP homolog C).

BIRC2 OR APII OR IAPI OR MIHC.

Homo sapiens (Human).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE-96128127; PubMed-85
Rothe M., Pan M.-G., Henzel
"The TNFR2-TRAF signaling c
to baculoviral inhibitor of
Cell 83:1243-1252(1995).
                                                                                                                                                                                                                                                                                                                              genes.
Blood
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Uren A.G., Pakusch M., Hawkins C.J., Puls K.L., V "Cloning and expression of apoptosis inhibitory p function to inhibit apoptosis and/or bind tumor n receptor-associated factors.";

Proc. Natl. Acad. Sci. U.S.A. 93:4974-4978(1996).
                                                                                                                                                                                                                                                                                                                                                                        Horrevoets A.J., Fontijn R.D., van Zonneveld A.J., de V
ten Cate J.W., Pannekoek H.;
"Vascular endotheilal genes that are responsive to tumc
factor-alpha in vitto are expressed in atherosclerotic
including inhibitor of apoptosis protein-1, stannin, an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE-96149249; PubMed-8552191;
Liston P., Roy N., Tamai K., Lefe
Farahani R., McLean M., Ikeda J.,
"Suppression of apoptosis in mamm
family of IAP genes.";
Nature 379:349-353(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Primates; MCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A. MEDLINE=99252096;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TISSUE=Fetal liver;
MEDLINE=96209843; P
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G., Henzel W.J., Ayres T.M., Goeddel
ignaling complex contains two novel
hibitor of apoptosis proteins.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PubMed-8643514;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PubMed=10233894;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      i K., Lefebvre C., Baird Ikeda J., Mackenzie A., is in mammalian cells by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  612
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Catarrhini; Hominidae
                                                                BIR MOTIFS REGION INTERACTS
S 1 AND 2 (TRAF1 AND TRAF2)'
IS THEN RECRUITED TO THE TUM
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Korneluk R.G.;
NAIP and a related
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protein homologs
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PROSITE; PS50143; BIR_REPEAT_2;
PROSITE; PS50209; CARD; 1
PROSITE; PS50209; CARD; 1; FAI
PROSITE; PS50089; ZF_RING_1; FAI
PROSITE; PS50089; ZF_RING_2; 1.
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SUBUNIT: Interacts with SNAC and with PRSS25; these interactions: SUBUNIT: Interacts with SNAC and with PRSS25; these interactions: Inhibit apoptotic suppressor activity.

SUBCELLULAR LOCATION: Cytoplasmic (Potential).

TISSUE SPECIFICITY: HIGHLY EXPRESSED IN FETAL LUNG, AND KIDNEY: IN THE ADULT, EXPRESSION IS MAINLY SEEN IN LYMPHOID TISSUES.

INCLUDING SPLEEN, THYMUS AND PERIPHERAL BLOOD LYMPHOCYTES.

DISEASE: Involved in a t(11;18)(q21;q21) chromosomal translocation recurrent in low-grade MALT lymphoma (Mucosa-associated lymphoid tissue): This translocation is found in approximately 50% of cytogenetically abnormal low-grade MALT lymphoma and involves CALTI and BIRC2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            s SWISS-PROT entry is copyright. It is produced through ween the Swiss Institute of Bioinformatics and the En European Bioinformatics Institute. There are no resti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SIMILARITY: BELONGS TO THE IAP FAMILY.
SIMILARITY: CONTAINS 3 BIR REPEATS.
SIMILARITY: CONTAINS 1 CARD DOMAIN.
SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
                                                                                                                                                                                                                                                                                                              1; PF00097; zf-C3HC4;
1; PF00619; CARD; 1.
1; PF00653; BIR; 3.
TT; SM00238; BIR; 3.
TT; SM00114; CARD; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                        ; L49432; AAC41943.1; -.; U45878; AAC50371.1; -.; U37546; AAC50577.1; -.; AF070674; AAC83232.1; -AF178945; AAG09369.1; -
601712;
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                                          tch 71.8%; al Similarity 72.8%; 440; Conservative 7
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IPR001315; CARD.
IPR001841; Znf_ring.
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RESULT 4
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                              -!- SUBCELLULAR LOCATION: PREDOMINANTLY NUCLEAR.
-!- TISSUE SPECIFICITY: CELLS OF THE T LYMPOSTE LINEAGE.
BOTH CORTICAL AND MEDULLARY CELLS OF THE THYMUS.
-!- DEVELOPMENTAL STAGE: HIGH LEVELS ARE INDUCED WITHIN 4-6
T-CELL ACTIVATION IN SPLEEN AND THYMUS.
                                                                                                                          MEDLINE=97101112; PubMed=8945639;
Digby M.R., Kimpton W.G., York J.J.,
"ITA, a vertebrate homologue of IAP
                                                                                                                                                                                                                                Gallus gallus (Chicken).
Fukarvota: Metazoa; Chordata;
                                                                                          DNA Cell Biol. 15:981-988(1996).
-!- FUNCTION: APOPTOTIC SUPPRESSOR (BY SIMILARITY).
                                                                                                                                                                                                                                                                    protein).
                                                                                                                                                                                                                                                                                            01-NOV-1997
16-OCT-2001
                                                                                                                                                                                                                                                                                                                   Q90660;
01-NOV-1997
                                                                                                               lymphocytes.
                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                NCBI_TaxID=9031;
                                                                                                                                                                                                                       Archosauria; Aves; Neognathae;
                                                                                                                                                                                                                                                                                  Inhibitor
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SIMILARITY: BELONGS TO THE IAP FAMILY SIMILARITY: CONTAINS 3 BIR REPEATS. SIMILARITY: CONTAINS 1 CARD DOMAIN.
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                                                                                                                                                                                                                                                                  STANDARD;
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; Galliformes; Phasianidae; Phasiani
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Genomics 46:495-503(1997).

Genomics 46:495-503(1997).

FUNCTION: APOPTOTIC SUPPRESSOR. THE BIR MOTIFS REGION INTERACTS THAT THE RECEPTOR ASSOCIATED FACTORS 1 AND 2 (TRAF1 AND TRAF2) TO FORM AN HETEROMERIC COMPLEX, WHICH IS THEN RECRUITED TO THE TUMO) NECROSIS FACTOR RECEPTOR 2 (TNFR2) (BY SIMILARITY).

SUBUNIT: Interacts with SMAC and with PRSS25; these interactions inhibit apoptotic suppressor activity (By similarity).

INDICALIULAR LOCATION: Cytoplasmic (Potential).

SUBCELLULAR LOCATION: TO THE TAP FAMILY.

SIMILARITY: CONTAINS 3 BIR REPEATS.

SIMILARITY: CONTAINS 3 BIR REPEATS.

SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
                                                                                                      use by non-profit institutions as long a modified and this statement is not removed. entities requires a license agreement (See |
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Baculoviral IAP repeat-containing protein 2 (
protein 1) (MIAP-1).
                                                                               or send an
                                                                                                                                                                                        the European Bioinformatics Institute.
                                                                                                                                                                                                               This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TISSUE=Skeletal muscle;
MEDLINE=98110590; PubMed=9441758;
Liston P., Lefebvre C., Fong W.G., Xuan J.Y., Korneluk R.G.;
"Genomic characterization of the mouse inhibitor of apoptosis.protein and 2 genes.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mus musculus (Mouse)
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                                                                               email to license@isb-sib.ch).
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Matches 406
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15-DEC-1998
15-DEC-1998
16-OCT-2001
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ZN_FING
SEQUENCE
                                                                                                                                                  Sus scrofa (Pig).
Eukaryota; Metazoa;
Mammalia; Eutheria;
MEDIINE-98162622; PubMed-9501011;
Stehlik C., de Martin R., Binder B.R., Lipp J.;
"Cytokine induced expression of porcine inhibitor of
protein (iap) family member is regulated by NF-kappa
                                                                                                                                                                                                           PIAP
                                                                                               SEQUENCE FROM N.A.
                                                                                                                                   NCBI_TaxID-9823;
                                                                                                                                                                                                                              Putative
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e inhibitor of
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Pred. No. 5.1e-136;
7; Mismatches 96;
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Best Local
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InterPro; IPRO01315; CARD.
InterPro; IPRO01315; CARD.
InterPro; IPRO01841; Znf_ring.
InterPro; IPRO01841; Znf_ring.
InterPro; IPRO01841; Znf_ring.
InterPro; IPRO01841; CARD; 1.
Pfam; PF00653; BIR; 2.
SMART; SM00184; CARD; 1.
SMART; SM00184; CARD; 1.
SMART; SM00184; RING; 1.
SMART; SM00184; RING; 1.
SMART; SM00184; ZIR, REPEAT_1; 2.
PROSITE; PS01282; BIR, REPEAT_1; 2.
PROSITE; PS50143; BIR, REPEAT_2; 2.
PROSITE; PS50018; ZF_RING_1; FALSI
PROSITE; PS50018; ZF_RING_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                            DOMAIN
ZN_FING
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                            Apoptosis;
REPEAT
REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This SWISS-PROT entry is copyright. It is produced through a collab between the Swiss Institute of Bioinformatics and the EMBL outst the European Bioinformatics Institute. There are no restrictions use by non-profit institutions as long as its content is in modified and this statement is not removed. Usage by and for comentities requires a license agreement (See http://www.isb-sib.ch/anor send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Biochem. Biophys. Res. Commun. 243:827-832(1998).
-!- SIMILARITY: BELONGS TO THE IAP FAMILY.
-!- SIMILARITY: CONTAINS 2 BIR REPEATS.
-!- SIMILARITY: CONTAINS 1 CARD DOMAIN.
-!- SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL; U79142; AAC39171.1; -. HSSP; Q13490; 1QBH.
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                    600
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            RKCPICRGIIKGTVRTFLS
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BIR 1.
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RING-TYPE.
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Pred. No. 4
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3; Mismatches
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BIR4_HUMAN STANDARD; PRT;
P98170; Q9NQ14;
01-OCT-1996 (Rel. 34, Created)
01-OCT-1996 (Rel. 34, Last sequence
15-JUN-2002 (Rel. 41, Last annotation)
Baculoviral IAP repeat-containing protein 3) (X-linked inhibitor of a)
                                                                                                                                                                                                                                                   Verhagen A.M., Silke J., Ekert P.G., Pakusch M., Kaufmann Connolly L.M., Day C.L., Tikoo A., Burke R., Wrobel C., Mc Simpson R.J., Yaux D.L.; "HtrA2 promotes cell death through its serine protease act its ability to antagonize inhibitor of apoptosis proteins J. Biol. Chem. 277:445-454(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE-96256286; PubMed-8654366;
Duckett C.S., Nava V.E., Gedrich R.W., Clem R.J.,
Gilfillan M.C., Shiels H., Hardwick J.M., Thompso
"A conserved family of cellular genes related to
gene and encoding apoptosis inhibitors.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Liston P., Roy N., Tamai K., Lefebvre C., Bai:d Farahani R., McLean M., Ikeda J., Mckenzie A., "Suppression of apoptosis in mammalian cells by family of IAP genes.", Nature 379:349-353(1996).
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"X-linked IAP is a direct inhibitor of
Nature 388:300-304(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (IAP-like protein) (HILP).
BIRC4 OR API3 OR IAP3 OR XIAP
                                                                                                                                                     Nature 408:1004-1008(2000).
                                                                                                                                                                             Liu Z., Sun C., Olejniczak E.T., Meadows R.P.,
Herrmann J., Wu J.C., Fesik S.W.;
"Structural basis for binding of Smac/DIABLO to
                                                                                                                                                                                                                 MEDLINE=21020961;
                                                                                                                                                                                                                                                                                                                                 MUTAGENESIS OF ASP-148; ASP-214; ASP-214; ASP-214; ASP-21634829; PubMed=11604410;
                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE-97373959;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TISSUE=Fetal brain;
MEDLINE=96149249; p
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Primates;
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                                                                                                                                                                   domain."
                                                                                                                                                                                                                                 STRUCTURE BY NMR OF 241-356
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Submitted
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Eukaryota; Metazoa;
                                                                                     FUNCTION: Apoptotic suppressor. Inhibitor SUBUNIT: Interacts with SMAC and with PRSVIDINIT: Inhibit apoptotic suppressor activity.
SUBCELLULAR LOCATION: Cytoplasmic.
TISSUE SPECIFICITY: UBIQUITOUS, EXCEPT PER
and third BIR domains SIMILARITY: BELONGS T
                                                              DOMAIN: The second BIR domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   and encoding apoptosis J. 15:2685-2694(1996).
                      interactions with SMAC third BIR domains.
                                               -7, while the third
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           IAP FAMILY
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are mediated by
                                                                                                                           PRSS25; these interactions
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Phompson C.B
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Korneluk R.G.;
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                                                             inhibit caspase-3
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Pfam; PF00053; BIR; 3.
SMART; SM00238; BIR; 3.
SMART; SM00184; RING; 1.
SMART; SM0184; RING; 1.
SMOSITE; PS01282; BIR_REPEAT_1; 3
PROSITE; PS50143; BIR_REPEAT_2; 3
PROSITE; PS001518; ZF_RING_1; FALS
PROSITE; PS0089; ZF_RING_2; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 This SWISS-PROT entry is copyright. It is produced through a collab between the Swiss Institute of Bioinformatics and the EMBL outset the European Bioinformatics Institute. There are no restrictions use by non-profit institutions as long as its content is in modified and this statement is not removed. Usage by and for comentities requires a license agreement (See http://www.isb-sib.ch/an
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InterPro; IPR001841; Znf_ring.
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                                             DPPIIHFGPGESSSEDAVMMNTPVVKSALEMGFNRDLVKQTVQSKILTTGENYKTVNDIV
                                                                               LTDWKPSEDPWEQHAKWYPGCKYLLEQKGQEYINNI--HLTHSLEECLVRTTEKT----
                                                                                           LRCWESGDDPWVEHAKWFPRCEFLIRMKGQEFVDEIQGRYPHLLEQ-LLSTSDTTGEENA
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BIR 2.
BIR 3.
BIR 3.
RING-TYPE.
D->S: REDUCED INT
E->S: DECREASED INT
E->S: DECREASED INT
E->C (IN REF. 1)
O-> P (IN REF. 1)
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Pred. No. 6.4e
39; Mismatches
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-> C (IN REF. 1).
-> P (IN REF. 2).
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Q60999; Q08865;

Q1-NOV-1997 (Rel. 35, Created)

Q1-NOV-1997 (Rel. 35, Last sequence update)

15-UN-2002 (Rel. 41, Last annotation update)

E Baculoviral InAp repeat-containing protein 4 (Inh

E protein 3) (X-linked inhibitor of apoptosis prot

E (IAP homolog A) (MIAP3) (MIAP-3).

BIRC4 OR API3 OR XIAP OR AIPA OR MIHA.
                                                                                                                                                                                 EMBL;
                                                                                                                                                                                                                                                       use by non-profit institutions as long modified and this statement is not removed. entitles requires a license agreement (See or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Uren A.G., Pakusch M., Hawkins C.J., Puls K.L., V. "Cloning and expression of apoptosis inhibitory p function to inhibit apoptosis and/or bind tumor n receptor associated factors.";

Proc. Natl. Acad. Sci. U.S.A. 93:4974-4978(1996).
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MEDLINE-96209843; Publ
                                                                      EMBL; U88990; AAB58376.1; -.
HSSP; Q13490; 1QBH.
HSSP; Q13490; 1QF.
MGD; MGI:107572; Birc4.
InterPro; IPR001370; BIR.
InterPro; IPR001841; Znf_ring.
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Mammalia; Eutheria; Rodentia;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                         SUBUNIT: Interacts with SMAC and with PRSS25; these interactions inhibit apoptotic suppressor activity (By similarity).

SUBCELLULAR LOCATION: Cytoplasmic (By similarity).

SUBCELLULAR LOCATION: Cytoplasmic (By similarity).

DOMAIN: The second BIR domain is sufficient to inhibit caspase-3 and -7, while the third BIR is involved in caspase-9 inhibition.

The interactions with SMAC and PRSS25 are mediated by the second and third BIR domains (By similarity).

SIMILARITY: BELONGS TO THE IAP FAMILY.

SIMILARITY: CONTAINS 3 BIR REPEATS.

SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGEE.
                                                                                                                                                                                                                                                                                                                                                       ween the Swiss Institute of Bioinformatics Institute.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FUNCTION: Apoptotic suppressor.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (By similarity)
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PubMed-8643514;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ., Korneluk R.G., Mackenzie A.E.; the EMBL/GenBank/DDBJ databases. suppressor. Inhibitor cf caspase-3,
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PROSITE; PS01282; BIR_REPEAT,
PROSITE; PS50143; BIR_REPEAT,
PROSITE; PS00518; ZF_RING_1;
PROSITE; PS50089; ZF_RING_2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ZN_FING
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                                                                                                                                 414
                 594
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                                                                                                                                                                                                                                                                                                                                                                                                    27 ILSDWTNSNKQKMKYDFSCELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCC
                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
les 203; Conser
                                                                                                                                                                                                                                                                                                                                                                                 ECAPSLRKCPICRGIIKGTVRTELS
:|| :: |||:| :| :| :|
QCAEAVDKCPMCYTVITEKQKIEMS
                                               TLYKNLFVDKNMKYIPTEDVSGLSLEEQLRRLQEERTCKVCMDKEVSVVFIPCGHLVVCQ
                                                                                                                         CVLPILDNLLKANVINKQEHDIIKQKTQIPLQARELIDTILVKGNAAANIFKNCLKEIDS
                                                                                                              EEKIQTSGSSYLSLEVLIADLVSAQKDNTEDE:
                                                                                                                                                    HLTHSLEESLGRTAEKT-----PSLTKKIDDTIFQNPMVQEAIRMGFSFKDIKKTM
                                                                                                                                                                      HLLEQLLSTSDTTGEENADPPIIHFGPGESSSEDAVMMNTPVVKSALEMGFNRDLVKQTV
                                                                                                                                                                                        GFYALGEGDKVKCFHCGGGLTDWKPSEDPWEQHAKWYPGCKYLLDEKGQEYINNI-----
                                                                                                                                                                                                           GFYYVGRNDDVKCFCCDGGLRCWESGDDPWVEHAKWFPRCEFLIRMKGQEFVDEIQGRYP
                                                                                                                                                                                                                                                                               WP-LTFLSPSELARAGFYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRKHFPNCPFL--
                                                                                                                                                                                                                                                                                                       QYKSENCYGNRNPFAPDRPPETHADYLLRTGQVVDISDT-IYPRNPAMCSEEARLKSFQN
                                                                                                                                                                                                                                                                                                                                             HAAIDRWQYGDSAVGRHRRISPNCRFI---
                                                                                                                                                                                                                                                                                                                                                              GLMLDNWKLGDSPIQKHKQLYPSCSFIQNLVSASLGSTSKNTSPMRNSFAHSLSPTLEHS
                                                                                                                                                                                                                               RNVNVRSESGVSSDRNFPNSTNSPR----NPAMAEYEARIVTFGTWTSS--VNKEQLARA
                                                                                                                                                                                                                                                                    WPDYAHLTPRELASAGLYYTGADDQVQCFCCGGKLENWEPCDRAWSEHRR: FPNCFFVLG
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                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     finger;
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                                                                                                                                                                                                                                                                                                                                                                                                                                27.8%;
                                                                                                                                                                                                                                        ENSLETLRFSISNLSMQTHAARMRTFMYWPSSVPVQPEQLASA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Repeat
                                    KDISTEEQLRRLQEEKLCKICMDRNIAIVFVPCGHLVTCK
                                                                                                                                                                                                                                                                                                                                                                                                                       92;
                                                                                                                                                                                                                                                                                                                                                                                                                      Score 910; DB
Pred. No. 7.4e
92; Mismatches
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BIR
BIR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FALSE_NEG
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                                                                          -SSQTSLQ-
 496
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                                                                                                                                                                                                                                                                                                                                                                                                                               ± 910;
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                                                                                                                                                                                                                                                                                                                                                                                                                                4e-53;
                                                                                                                                                                                                                                                                                                                                                                                                                                          1.
                                                                                                                                                                                                                                                                                                                                             NGFYFENGAAQSTNPGIQNG
                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 496;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                        174;
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                                      471
                                                       593
                                                                          431
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RESULT 9 BIR4_RAT

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Best Local Similarity
                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro; IPRO01370; BIR.
InterPro; IPRO01841; Znf_rin;
Pfam; PF00097; zf-C3HC4; 1.
Pfam; PF00053; BIR; 3.
SMART; SM00238; BIR; 3.
SMART; SM00184; RING; 1.
                                                                                                                                                                                                                                                                           REPEAT
ZN_FING
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -I- SUBUNIT: Interacts with SMAC and with PRSS25; these interactions inhibit apoptotic suppressor activity (By similarity).
-I- SUBCELLULAR LOCATION: Cytoplasmic (By similarity).
-I- DOMAIN: The second BIR domain is sufficient to inhibit caspase-3 and -7, while the third BIR is involved in caspase-9 inhibition. The interactions with SMAC and PRSS25 are mediated by the second and third BIR domains (By similarity).
-I- SIMILARITY: BELONGS TO THE IAP FAMILY.
-I- SIMILARITY: CONTAINS 3 BIR REPEATS.
-I- SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Baculoviral IAP repeat-containing protein 4 (Inhibitor of apoptosis protein 3) (X-linked inhibitor of apoptosis protein 3) (X-linked inhibitor of apoptosis protein) (X-linked IAP)
(IAP homolog A) (RIAP-3).
BIRC4 OR API3 OR XIAP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          the European Bioinformatics Institute. There are no rest
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modified and this statement is not removed. (Isage by an
entitles requires a license agreement (See http://www.isb-
or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BIR4_RAT
Q9R0I6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatic; and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Rattus norvegicus X
Submitted (OCT-1999)
-!- FUNCTION: Apopto:
                                                                                                                                                                                                                                                                                                                                                                          PROSITE; PS01282; BIR_REPEAT_1; 3.
PROSITE; PS50143; BIR_REPEAT_2; 3.
PROSITE; PS00518; ZF_RING_1; FALSE_NEG.
PROSITE; PS50089; ZF_RING_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; AB033366;
HSSP; Q13490; 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Saito
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Rattus norvegicus (Rat).
                                                                                                                                                                                                                                                                                                                                            Apoptosis;
REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                              REPEAT
            129
                                            139
                                                                           73
                                                                                                            93
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ttus norvegicus X-linked inhibitor of aportosis (riap3) mRNA."; mitted (OCT-1999) to the EMBL/GenBank/DDB: databases.
FUNCTION: Apoptotic suppressor. Inhibitor of caspase-3, -7 and (By similarity).
                                         LSPTLEHSSLFSGSYSSLSPNPLNSRAVEDISSSRTNPYSYAMSTEEARFLTYHMWP-LT 197
                                                                                             DTNKDE---
                                                                                                                                                              NSNKQKMKYDFSCELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDN 92
----LDRPSETHADYL------LRTGQVVDISDT-IYPRNPAMCSEEARLKTFQNWPDYA 177
                                                                          WQYGDSAVGRHRRISPNCRFINGFYFEN-GAT-QSTSPGIQNGQYKSENCVGNRNHFA--
                                                                                                                                                                                                                                                                         ; Zinc-finger; Repeat.
26 93 BIR
163 230 BIR
264 329 BIR
449 484 RIN
496 AA; 56072 MW; E
                                                                                                                                                                                                           Conservative
                                                                                                                                         EFVEEFNRLKTFANFPSSSPVSASTLARAGFLYTGEGDTVQCFSCHAAVDR 72
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BAA85304.1; -.
                                                                                                                                                                                                                          27.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Znf_ring.
                                                                                                                                                                                                           6;
                                                                                                                                                                                                                          Score 904.5; DB 1; Length 496; Pred. No. 1.7e-52;
                                                                                                                                                                                                                                                                         BIR 1.
BIR 2.
BIR 3.
RING-TYPE.
; E250E3C77461A469 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Rat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (See http://www.isb-sib.ch/announce/
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                                                                                                                                                                                                           Indels 173;
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                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              no
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bMed-8654366; .E., Gedrich R.W., Clem R.J., van Dongen J.L., ls H., Hardwick J.M., Thompson C.B.;	SEQUENCE FROM N.A. SEQUENCE FROM N.A. STRAIN-Canton-S; MEDLINE-96256286; PubMed-8654366 Duckett C.S., Nava V.E., Gedrich Gilfillan M.C., Shiels H., Hardw	R R R R R R
<pre>bMed=8552191; ama1 K., Lefebvre C., Baird S., Cherton-Horvat G., M., Ikeda J., Mackenzie A., Korneluk R.G.; tosis in mammalian cells by NAIP and a related ", 996).</pre>	P SEQUENCE FROM N.A. C TISSUE-Embryo; C TISSUE-96149249; PubMed-8552191 X MEDLINE-96149249; PubMed-8552191 X MEDLINE-96149249; PubMed-8552191 X Farahani R., McLean M., Ikeda J. A Farahani R., McLean M., Ikeda J. T "Suppression of apoptosis in mam T family of IAP genes."; N [3] N [1]	R R R R R R R R R R R R R R R R R R R
<pre>disk; bMed-8548811; b.A., Rubin G.M.; of baculovirus inhibitor of apoptosis proteins 11 death."; 95).</pre>	881 bir lov	RY RT
ter (Frult Ily). Arthropoda; Mandibulata; Pancrustacea; Hexapoda; Neoptera; Endopterygota; Diptera; Brachycera; idea; Drosophilidae; Drosophila.	<pre>brosopnila meianogaster (Fruit I Eukaryota; Metazoa; Arthropoda; I Insecta; Pterygota; Neoptera; En Muscomorpha; Ephydroidea; Drosopi NCBI_TaxID=7227; [1]</pre>	
, Last sequence update) , Last annotation update) r (Inhibitor of apoptosis 2) (DIAP2) (DIAP) (IAP protein) (DILP). OR CG8293.	01-NOV-1997 (Rel. 35, Last sequence update) 15-JUN-2002 (Rel. 41, Last annotation update) Apoptosis 2 inhibitor (Inhibitor of apoptosis inhomolog a) (IAP-like protein) (DILP). IAP2 OR ILP OR DIHA OR CG8293.	
PRT; 498 AA. 15; Q24149; Q9V7G1; , Created)	ILT 10 2_DROME STANDARD; PR' 1AP2_DROME STANDARD; Q24149; Q24307; Q24177; Q24115; Q24149; Q1-NOV-1997 (Rel. 35, Created)	
RIFLS 618:	599 LRKCPICRGIIKGTVRTFLS 618 : : : : :	Qy Db
SGLSLEEQLRRLQEERTCKVCMDKEVSVVFIPCGHLVVCQECAPS 598	છું — છું	рb
LIDTILVKGNAAANIFKNCLKEIDSTLYKN 53	79 LDNLLKANVINKQEHDIIK(Qy
LLNAEDEKREEEKEKQAEEMASDDLSLIRKNRWALFQQLTCVLPI 478 :: :	419 TTGENYKTVNDIVSALLNAEDEKREEEI : :: :: :: :: :: :: :: :: :	Оy
PIIHFGPGESSSEDAVMMNTPVVKSALEMGFNRDLVKQTVQSKIL 418	359 LLSTSDTTGEENADPFIHFGPGESSSI	Оy
RNDDVKCFCCDGGLRCWESGDDWVEHAKWFPRCEFLIRMKGQEFVDEIQGRYPHLLEQ 358 : :	299 GRNDDVKCFCCDGGLTCWESGDDPWVEI	Ωу
LETLRESISNLSMQTHAARMRTFMYWPSSVPVQPEQLASAGFYYV 298 	ı O	Оу
FLSPSELARAGFYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCPFL 250 	198 FLSPSELARAGFYYIGPGDRVACFACGO	Оу

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"A conserved family of cellular genes related

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the baculovirus

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RA Ballew R. M., Basu A., Baxendale J., Bayraktaroglu L., Beasley E.M.,
RA Beeson K.Y., Benos P.V., Berman B.P., Bhandari D., Bolshakov S.,
RA Borkova D., Botchan M.R., Bouck J., Brokstein P., Brottier P.,
RA Burtis K.C., Busam D.A., Butler H., Cadieu E., Center A., Chandra I.,
RA de Pablos B., Delcher A., Deng Z., Mays A.D., Dew I., Dietz S.M.,
RA de Pablos B., Delcher A., Deng Z., Mays A.D., Dew I., Dietz S.M.,
RA de Pablos B., Delcher A., Deng Z., Mays A.D., Dew I., Dietz S.M.,
RA de Pablos B., Delcher A., Deng Z., Mays A.D., Dew I., Dietz S.M.,
RA Dodson K., Doup L.E., Downes M., Dugan-Rocha S., Dunkov B.C., Dunn P.,
RA Durbin K.J., Evangelista C.C., Ferraz C., Ferriera S., Fleischmann W.,
RA Fosler C., Gabrielian A.E., Garg N.S., Gelbart W.M., Glasser K.,
RA Glodek A., Goong F., Gorrell J.H., Gu Z., Gebart W.M., Glasser K.,
RA Harris N.L., Harvey D., Heiman T.J., Hernandez J.R., Houck J.,
RA Hostin D., Houston K.A., Howland T.J., Wei M.-H., Ibegwam C.,
RA Kimmel B.E., Kodira C.D., Kraft C., Kravitz S., Kulp D., Lai Z.,
RA Liu X., Mattei B., McIntosh T.C., McLeod M.P., McPherson D.,
RA Liu X., Mattei B., McIntosh T.C., McLeod M.P., McPherson D.,
RA Merkulov G., Milshina N.V., Mobarry C., Morris J., Moshrefi A.,
RA Munnt S.M., Moly M., Murphy B., Murphy L., Muzny D.M., Nelson D.L.,
RA Meng Z.-Y., Walson K.A., Nixon K., Nusskern D.R., Pacleb J.M.,
RA Palazzolo M., Pittman G.S., Pan S., Pollard J., Puri V., Reese M.G.,
RA Raing Z.-Y., Wassarman D.A., Weinstock G.M., Weisenbach J.,
RA Wang Z.-Y., Wassarman D.A., Weinstock G.M., Weisenbach J.,
RA Wang Z.-Y., Wassarman D.A., Weinstock G.M., Weisenbach J.,
RA Zheng X.H., Zhong F.M., Zhong W., Zhong S., Zhao Q., Zheng L.,
RA Zheng X.H., Zhong F.M., Zhong W., Zhong S., Zhao Q., Zheng L.,
RA Zheng X.H., Zhong W., Zhong W., Zhou X., Zhu S., Zhu X., Smith H.O.,
RA Zheng X.H., Zhong W., Zhong W., Zhong S., Zho Q., Zheng L.,
RA Zhong W. Shang M., Weinstock G.M., Weisenbach J.,
RA Zheng X.H., Zhong W., Zhong W., Zhou X., Zhu S., Zhu X., Smith H.O.,
RA Zhong W., Shang M., 
                                                                                                                                                                                                                                                                                                                                                           Proc. Natl. Acad. Sci. U.S.A. 93:4974-4978(1996).
-I- FUNCTION: APOPTOTIC SUPPRESSOR. OVEREXPRESSION SUPPRESSES
HID-DEPENDENT CELL DEATH IN THE EYE.
-I- DEVELOPMENTAL STAGE: EXPRESSED AT HIGH LEVELS THROUGHOUT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TISSUB-Larva;
MEDLINE-96209843; PubMed-8643514;
Uren A.G., Pakusch M., Hawkins C.J., Puls K.L.,
"Cloning and expression of apoptosis inhibitory"
"Cloning and expression of apoptosis and/or bind tumor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Adams M.D., Celniker S.E., Holt R.A., Evans C.A., Gocayne J.D.,
Amanatides P.G., Scherer S.E., Li P.W., Hoskins R.A., Galle R.F.,
George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N.,
Sutton G.G., Wortman J.R., Yandell M.D., Zhang Q., Chen L.X.,
Brandon R.C., Rogers Y.-H.C., Blazej R.G., Champe M., Pfeiffer B.D.,
Wan K.H., Doyle C., Baxter E.G., Helt G., Nelson C.R., Miklos G.L.G.,
Wan K.H., Doyle C., Baxter E.G., Helt G., Nelson C.R., Miklos G.L.G.,
Wan K.H., Doyle C., Baxter E.G., Helt G., Nelson C.R., Miklos G.L.G.,
Wan K.H., Doyle C., Baxter E.G., Helt G., Nelson C.R., Miklos G.L.G.,
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Wan K.H., Doyle C., Baxter E.G., Helt G., Nelson C.R., Miklos G.L.G.,
Wan K.H., Doyle C., Baxter E.G., Helt G., Nelson C.R., Miklos G.L.G.,
Wan K.H., Doyle C., Baxter E.G., Helt G., Nelson C.R., Miklos G.L.G.,
Wan K.H., Doyle C., Baxter E.G., Helt G., Nelson C.R., Miklos G.L.G.,
Wan K.H., Doyle C., Baxter E.G., Helt G., Nelson C.R., Miklos G.L.G.,
Wan K.H., Doyle C., Baxter E.G., Helt G., Nelson C.R., Miklos G.L.G.,
Wan K.H., Doyle C., Baxter E.G., Helt G., Nelson C.R., Miklos G.L.G.,
Wan K.H., Doyle C., Baxter E.G., Helt G., Nelson C.R., Miklos G.L.G.,
Wan K.H., Doyle C., Baxter E.G., Helt G., Nelson C.R., Miklos G.L.G.,
Wan K.H., Doyle C., Baxter E.G., Helt G., Nelson C.R., Miklos G.L.G.,
Wan K.H., Wan K.H., Wan K.H., Wan K.H., Wan K.H., Wan K.H., Wan K.H., Wan K.H., Wan K.H., Wan K.H., Wan K.H., Wan K.H., Wan K.H., Wan K.H., Wan K.H., Wan K.H., Wan K.H., Wan K.H., Wan K.H., Wan K.H., Wan K.H., Wan K.H., Wan K.H., Wan K.H., Wan K.H., Wan K.H., Wan K.H., Wan K.H., Wan K.H., Wan K.H., Wan K.H., Wan K.H
                         use by non-profit modified and this st entities requires a
                                                                                                                   This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the Extra the European Bloinformatics Institute. There are no resti
                                                                                                                                                                                                                                          -i- SIMILARITY: BELONGS TO THE IAP FAMILY.
-i- SIMILARITY: CONTAINS 3 BIR REPEATS.
-i- SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
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15:2685-2694(1996).
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to license@isb~sib.ch)
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Pfam; PF00653; BIR; 3.
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InterPro; IPR001370; BIR.
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                     EPSA----PFIEPCQATTSKAASVPIPVADS
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U45881;
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M96581;
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PS50143; BIR_REPEAT_2;
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E -> K (IN REF. 1).
A -> D (IN REF. 6).
A -> S (IN REF. 3).
P -> Q (IN REF. 2).
P -> T (IN REF. 2).
A -> T (IN REF. 2).
ALEYREPP -> DWRCASR.
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BIR 2.
BIR 3.
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N -> K (IN REF.
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SEQUENCE FROM N.A.
MEDLINE-94187094; PubMed-8139034;
Birnbaum M.J., Clem R.J., Miller L.K.;
Pan apoptosis inhibiting gene from a nuclear
Pan apoptosis inhibiting the from a nuclear
encoding a polypeptide with Cys/His sequence
J. Virol. 68:2521-2528(1994).
                                                                                                         SEQUENCE
                                                                                                                                                              Apoptosis;
REPEAT
                                                                                                                                                                                            PROSITE; PS01282; BIR_REPEAT_1;
PROSITE; PS0143; BIR_REPEAT_2;
PROSITE; PS00518; ZE_RING_1; FAU
PROSITE; PS50089; ZF_RING_2; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PREVENTING VIRAL STIMULATION OF APOPTOSIS.
-1- SIMILARITY: CONTAINS 2 BIR REPEATS.
-1- SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             polyhedrosis virus genome.";
Virology 229:381-399(1997).
-i- FUNCTION: ACTS BY BLOCKING
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Viruses; dsDNA virus
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P41437;
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Rohrmann G.F.;
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IAP3 OR IAP
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181 MSTEEARFLTYHMWPLTFLSPSELARAGFYYIGPGDRVACFACCGKLSNWEPKDDAMSEH 240
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rrro; IPR001841; Znf_r
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; PF000653; BIR; 2.
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268 AA;
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(Rel.
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es, no RNA stage; Baculoviridae;
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BIR 2.
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Pred. No. 5.
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ON OF APOPTOSIS.
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MEDLINE=99431676; PubMed=10501978;

Huang S., Scharf J.M., Growney J.D., Endriz

"The mouse Naip gene cluster on Chromosome
functional transcripts.";

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Genomics 38:405-417(1996)
                                               Scharf J.M., Damron D., Frisella A., I
Kunkel L.M., Dietrich W.F.;
"The mouse region syntenic for human s
within the Lgnl critical interval and
                                                                                                                                                                                                                                               STRAIN-129/SV;
MEDLINE-99417674; PubMed-10486205;
Endrizzi M., Huang S., Scharf J.M.,
Kunkel L.M., Miller W., Dietrich W.
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MGD; MGI:1298222; Birclf.
Interpro; IPR001370; BIR.
Pfam; PF00653; BIR; 3.
SMART; SM00338; BIR; 3.
PROSITE; PS01282; BIR_REPEAT_1; 2.
PROSITE; PS50143; BIR_REPEAT_2; 3.
PROSITE; PS50837; NACHT; 1.
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16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence up
15-JUN-2002 (Rel. 41, Last annotation
Baculoviral IAP repeat-containing prot
inhibitory protein 6).
BIRCIF OR NAIP5 OR NAIP-RS4.
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MEDLINE=20414747; PubMed=10958627;

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-I- FUNCTION: PREVENTS MOTOR-NEURON APOPTOSIS
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MEDLINE-97131520; PubMed-8975718;
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Mammalia; Eutheria; Rodentia;
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16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Baculoviral IAP repeat-containing protein 1g
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SEQUENCE FROM N.A.
MEDLINE=20414747; PubMed=10958627;
Endrizzi M.G., Hadinoto V.; Growne
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Eukaryota; Metazoa; C
Mammalia; Eutheria; R
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RAGFFYTGKKDIVRCFSCGGCLEKWAEGDDPMEDHIKFFPECVFLQTLKSSAEVIPTLQS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SAGFYYVGRNDDVKCFCCDGGLRCWESGDDPWVEHAKWFPRCEFLIRMKGQ-EFVDEIQG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QDYEGFVHVTGEHFVKSWVRRELPMVSAYCNDSVFTNEELEMDMFKDWPQESPVGFEALV
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SSLFSGSYSSLSPNPLNSRAVEDISSSRTNPYSYAMSTEENRFLTYHMWPLTF--LSPSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CSLILFGNSLRKLPIERHKKLRPECEFLQ --- GKDVGNIGKYDIRVK -------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGLMLDNWKLGDSPIQKHKQLYPSCSFIQNLVSASLGSTSXNTSPMRNSFAHSLSPTLEH 145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HKERMKMKKGFNSQMRSEAKRLKTFESYDTFRSWTP---QEMAAAGFYHTGVKLGVQCFC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FCHMNLPEVCSSLGTDHLLGCDVSIISKHVSQPVQGALTIPEVFSNLSSVMCVEGEAGSG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -VMMNTPVVKSALE----MGFNRDLVKQTVQSKI----LTTGENYKTVNDIVSALLNAEDE
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                                                                                         Chordata;
Rodentia;
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27.4%;
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%; Pred. No. 3.7e
73; Mismatches
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BIR 2
BIR 3
NACHT.
 Growney
                                                                                       Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                        PRT;
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3.7e-25;
hes 214;
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   Miller
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   Dietrich
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Query Match
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InterPro; IPR001370; BIR.
Pfam; PF00653; BIR; 3.
SMART; SM00238; BIR; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the Entropean Bioinformatics Institute. There are no restructed by non-profit institutions as long as its content modified and this statement is not removed. Usage by and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   entities requires a license agreement ( or send an email to license@isb-sib.ch)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Apoptosis;
REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PROSITE; PS01282; BIR_REPEAT_1; PROSITE; PS50143; BIR_REPEAT_2; PROSITE; PS50837; NACHT; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; AF242433; AAF82749.1; -. HSSP; Q13490; 1QBH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -1- SIMILARITY: CONTAINS 3 BIR REPEATS.
-1- SIMILARITY: CONTAINS 1 NACHT DOMAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "Genomic sequence analysis of the mouse Naip gene array.";
Genome Res. 10:1095-1102(2000).
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QKTQIPLQARELIDTILVKGNAAANIFKNCL-KEIDSTLYKNLFVDKNMKYIPTEDVSGL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NSNKOKMKYDFSCE-----LYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFC
                                                                                                                                                                                                                                                                                RYPHLLEQLLSTSDTTGEEN-ADPPIIH------FGPGESSSEDA-----
                                                                                                                                                                                                                                                                                                                           RAGEFYTGKKDIVRCFSCGGCLEKWAEGDDPMEDHIKFFPECVFLQTLKSSAEVIPTLQS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LARAGFYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCPFLEN--SLETLRFSI 261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SSLFSGSYSSLSPNPLNSRAVEDISSSRTNPYSYAMSTEEARFLTYHMWPLTF--LSPSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HKERMKMKKGFNSQMRSEAKRLKTFESYDTFRSWTP---QEMAAAGFYHTGVKLGVQCFC
                                                                 GKTTFLK-RIAFLWASGCCPLLYRFQLVFYLSLSSITPDQGLDNIICTQLL
                                                                                                       EKREEEKEKQAEEMASDDLSLIRKNRMALFQQLTCVLPI--LDNLLKANVINKÇEHDIIK
                                                                                                                                                                                               -VMMNTPVVKSAL-----
                                                                                                                                                                                                                                          QY-----ALPEATETTRESNHGDAAAVHSTVVDLGRSEAQWFQEARSLSEQLRDTYTKTS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGLMLDNWKLGDSPIQKHKQLYPSCSFIQNLVSASLGSTSKNTSPMRNSFAHSLSPTLEH 145
                                                                                                                                                    FCHMNLPEVCSSLGTDHLLSCDVSIISKHISQPVQG-ALTIPEVFSNLSSVMCVEGEAGS
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127 BIR 1.
227 BIR 2.
345 BIR 3.
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345
759
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26.9%;
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Pred. No. 4.3e-25;
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                                                                                                                                                                                                           Query Match
Best Local Sim
Matches 126;
                                                                                                                                                                                                                                                                                                                            REPEAT
ZN_FING
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro; IPR001841; Znf_ring.
Pfam; Pr00097; Zf-C3HC4; 1.
Pfam; Pr00653; BIR; 2.
SMART; SM00238; BIR; 2.
SMART; SM00184; RING; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL; L49440; AAC41609.1;
HSSP; Q13490; 1QBH.
FlyBase; FBgn0003691; th.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cell 83:1253-1262(1995).

-!- FUNCTION: APOPTOTIC SUPPRESSOR. OVEREXPRESSION SUPPRESSES RPR AND
-!- FUNCTION: APOPTOTIC SUPPRESSOR. OVEREXPRESSION SUPPRESSES RPR AND
-!- SIMILARITY: BELONGS TO THE IAP FAMILY.
-!- SIMILARITY: CONTAINS 2 BIR REPEATS.
-!- SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TISSUE=Eye imaginal disk;
MEDLINE=96128128; PubMed=8548811;
Hay B.A., Wassarman D.A., Rubin G.M.;
"Drosophila homologs of baculovirus inhibitor of apoptosis proteins function to block cell death.";
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Eukaryota; Metazoa; Arthropoda; Mandibulata; Pancrustacea; Hexapoda;

Insecta; Pterygota; Neoptera; Endopterygota; Diptera; Brachycera;

Muscomorpha; Ephydroidea; Drosophilidae; Drosophila.

NCBI_TaxID=7227;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           use by non-profit institutions as long modified and this statement is not removed.
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01-NOV-1997 (Rel. 35, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Apoptosis 1 inhibitor (Inhibitor of apoptosis 1) (DIAP1) (Thread
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PROSITE; PS01282; BIR_REPEAT_1;
PROSITE; PS00143; BIR_REPEAT_2;
PROSITE; PS00518; ZE_RING_1; FAX
PROSITE; PS50089; ZE_RING_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
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                           218 VACFACGGKLSNWEPKDDAMSEHRRHFPNCPF---
                                                                                                                                       162 NSRAVE----DISSSRTNPYSYAMSTEEARFLTYHMWPLTFLSISELARAGFYYIGPGDR 217
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BIR 2.
RING-TYPE.
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Pred. No. 8e-25;
2; Mismatches 128; Indels 2
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420	VEATAVATPSTNSSGSTSIPEEKLCKICYGAEYNTAFLPCGHVVACAKCASSVT	367	ğ
600	VDKNMKYIPTEDVSGLSLEEQLRRLQEERTCKVCMDKEVSVVFIPCGHLVVCQECAPSLR	541	¥
366	TAATRIFNKI	357	ğ
540	NILKANVINKQEHDIIKQKTQIPLQARELIDTILVKGNAAANIFKNCLKEIDSTLYKNLF	481	γ
356		329	ğ
480	KNRMALFQQLTCVLPILD	421	¥
328	ESTSIGGDTVAS	317	ğ
420	STSDTTGEENADPPIIHFGPGESSSEDAVMMNTPVVKSALEMGFNRDLVKQTVQSKILTT 420	361	¥
316	GDRVRCFSCGGGLMDWNDNDEPWEQHALMLSQCRFVKLMKGQLYIDTVAAK-PVLAEEKE	258	ğ
360	NDDVKCFCCDGGLRCWESGDDPWVEHAKWFPRCEFLIRMKGQEFVDEIQGRYPKLLEQLL	301	Ϋ́
257	ATGDVQPETCRPSAASGNYFPQYPEYAIETARLRTFEAWPRNLKQKPHQLkEAGFFYTGV 257	198	ᅜ
300	ARMRTFMYWPSSVPVQPEQIASAGEYYVGR 300	271	¥
197	GANDSTLEMREHAYAEGVIPMSQLIQSIGMNAVNAAGSVTGTAAPQPRVTVATHASTATQ 197	138	ᅜ
270	SNLSNQTHA	262	γ
137	VKCFFCGVEIGCWEQEDQPVPEHQRWSPNCPLLRRRTTNNVPINAEALDRILPPISYDIC 137	78	Ь

Search completed: May 5, 2003, 16:02:40 Job time: 28.6313 secs

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Result
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  Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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1: sp_archea:*
2: sp_bacteria
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7: sp_mhc:*
8: sp_phage:*
10: sp_plant:
11: sp_roden'
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3277
1 MHKTASQRLFPGPSYQNIKS.....LRKCPICRGIIKGTVRTFLS 618
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 GenCore version 5.1.4_p5_4578 Copyright (c) 1993 - 2003 Compugen Ltd.
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207.5	217.5	220	222	231.5	239.5	240	363.5	368.5	396.5	423.5	456.5	457.5	458.5	459.5	460.5	460.5	462.5	463.5	466.5	470	475.5	476	479	481.5	486	490	494	500.5
6.3	6.6	6.7	6.8	7.1	7.3	7.3		•	12.1	12.9	13.9	14.0	14.0	14.0	14.1	14.1	14.1	14.1	14.2	14.3	14.5	14.5	14.6	14.7	14.8	15.0	15.1	15.3
517	243	301	285	284	210	292	268	268	276	313	402	236	236	236	298	236	280	298	377	261	276	264	403	379	281	438	597	346
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		Q9pz54 trichoplusi	√9pyq9 xestia c-ni		5				Q8q195 mamestra co	7		Q95m72 pan troglod		Q95m71 gorilla gor	homo	homo	Q9hap'7 homo sapien	Q96ca5 homo sapien	Q9nj07 spodoptera		089744 buzura supp	Q9en27 amsacta moo		09u492 trichoplusi	29ynl8 choristoneu	09vux5 drosophila	U	Ç968tð bombyx mori

ALIGNMENTS

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Best Local Similarity Matches 488; Conserv
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InterPro; IPRO01315; CARD.
InterPro; IPR001841; Znf_ring.
Iffam; PF00653; BIR; 3
Pfam; PF006519; CARD; 1.
Pfam; PF00619; CARD; 1.
SMART; SM00238; BIR; 3.
SMART; SM00184; RING; 1.
SMART; SM00184; RING; 1.
SMART; SM00184; RING; 1.
SMART; SM00184; RING; 1.
SMART; SM0184; BIR_REPEAT_1; 3.
PROSITE; PS01285; BIR_REPEAT_2; 3.
PROSITE; PS01280; CARD; 1.
Zinc-finger: 580 Ab. 66777 MG. F66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "Cloning of cDNA for rat inhibitor of apoptosis; submitted (SEP-1999) to the EMBL/GenBank/DDBJ dat -- SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER. EMBL; AF190020; AAF04585.1; -- HSSP; Q13499; 1QBH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      O90ZC6 PRELIMINARY; PRT; 589 AA.
090ZC6;
01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
Inhibitor of apoptosis protein 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=10116;
[1]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus
                                                                                                                                                                SEQUENCE
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                                                                                                                                                                589
        Conservative
                                                                                                                                                                ΑA;
                                                                                                                                                                66777 MW;
                                         80.3%; Score 2630; DB 11;
81.7%; Pred. No. 1.6e-177;
                                                                                                                                                                E6812FFE3EA34142 CRC64;
        Mismatches
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                                                                                  Length 589;
        Indels
        Gaps
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Pfam; PF006519; CARD; 1.
Pfam; PF00097; zf-C3HC4; 1.
SMART; SM00238; BIR; 3.
SMART; SM00114; CARD; 1.
SMART; SM00184; RING; 1.
                                                                                                                                                                                  "Cloning and Characterization of the Rat Homol Apoptosis Protein 1, 2, and 3 Genes."; Submitted (SEP-1999) to the EMBL/GenBank/DDBJ - SIMILARITY: CONTAINS 1 RING-TYPE ZINC FING EMBL, AF183431; AAG22971.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q9ESE8
Q9ESE8;
Q1-MAR-2001 (TrEMBLrel.
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Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                              InterPro;
InterPro;
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01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
01-UN-2002 (TrEMBLrel. 21, Last annotation update)
Inhibitor of apoptosis protein 2.
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IPR001841; Znf_r
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PROSITE; PS5
Zinc-finger.
SEQUENCE 5
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057319;
[1]
SEQUENCE FROM N.A.
STRAIN-WHITE LECHORN; TISSUE-EMBRYONIC FIBROBLAST;
STRAIN-WHITE LECHORN; TISSUE-EMBRYONIC FIBROBLAST;
MEDLINE-98038801; PubMed-9372964;
YOU M., Ku P.-T., Hrdlickova R., Bose H.R. Jr.;
"ch-IAP1, a member of the inhibitor-of-apoptosis protein family, mediator of the antiapoptotic activity of the v-Rel oncoprotein.
Mol. Cell. Biol. 17:7328-7341(1997).
                                                                                                Gallus gallus (Chicken).
Eukaryota; Metazoa; Chordata;
Archosauria; Aves; Neognathae;
                                                                                                                                        PROTEINE).
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CARD; 1.
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Pred. No. 3.7e
54; Mismatches
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3.7e-177;
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nes; Phasianidae; Phasianinae;
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SMART; SM00114; CARD; 1.
SMART; SM00184; RING; 1.
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SEQUENCE
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TISSUE SPECIFICITY: EXPRESSED AT DETAILS.
SPLEEN TURNING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DOMAIN: THE RING FINGER IS IMPORTANT FOR ITS SIMILARITY: MEMBER OF THE IAP FAMILY. SIMILARITY: CONTAINS 3 BIR DOMAINS (BACULOVII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TISSUE SPECIFICITY: EXPRESSED AT RELATIVELY HIGH SPLEEN, THYMUS, BURSA, INTESTINE, AND LUNG, AND INTESTIS, BRAIN, AND SKELETAL MUSCLE.
INDUCTION: INDUCED DURING THE V-REL-MEDIATED TRAI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APOPTOSIS PROTEIN REPEAT)
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SUBCELLULAR LOCATION:
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VINKQEHDIIKQKTQIPLQARELIDTILVKGNAAANIFKNCLKEIDSTLYKNLFVDKNMK
                                               GEENADPPIIHFGPGESSSEDAVMMNTPVVKSALEMGFNRDLVKQTVQSKILTTGENYKT
                                                                                                                                                                         FCCDGGLRCWESGDDPWIEHAKWFPRCEYLLRVKGGEFVSQVQARFPHLLEQLLSISDTP
                                                                                                                                                                                           FCCDGGLTCWESGDDPWVEHAKWFPRCEFLIRMKGQEFVDEIQGRYPHLLEQLLSTSDTT
                                                                                                                                                                                                                                     FLTYHMWPLTFLSPSELARAGFYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNC
                                                                                                                                                                                                                                                                                                                                                                                 TSPMRNSFAHSLSPTLEHSSLFSGSYSSLSPNPLNSRAVEDISSSSRTNPYSYAMSTEEAR
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                                                                                                             VDENMD-PIIHFEPGESPSEDAIMMNTPVVKAALEMGFSRRL1KQTVQSKILATEENYKT
                                                                                                                                                                                                                                                                                                     LRTFHAWPLMFLSPAELAKAGLYYLGTADKVACFTCGGQLSNWEPKDNAMSEHRRHFPNC
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437; Conser
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PS50143; BIR_REPEAT_2;
PS50209; CARD; 1.
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IPR001315; CARD.
IPR001841; Znf_ring.
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610
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BIR REPEAT 2.
BIR REPEAT 3.
C3HC4-TYPE.
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Pred. No. 6
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Best Local
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Q9ESE9;
01-MAR-2001 (TrEMBLrel. 16, Creat
01-MAR-2001 (TrEMBLrel. 21, Last
01-JUN-2002 (TrEMBLrel. 21, Last
Inhibitor of apoptosis protein 1
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Pfam; PF00097; zf-C3HC4; 1.
SMART; SM00238; BIR; 3.
SMART; SM00114; CARD; 1.
SMART; SM00184; RING; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "Cloning and Characterization of the Rat Homologs of the Apoptosis Protein 1, 2, and 3 Genes.";
Submitted (SEP-1999) to the EMBL/GenBank/DDBJ databases
-!- SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
EMBL; AF183430; AAG22970.1; -
HSSP; Q13490; 1QBH.
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InterPro; IPR001315; CARD.
InterPro; IPR001841; Znf_ring
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TYQTWPLSFLSPAELAKAGFYYTGPGDRVACFACGGKLSNWDRKDDPLSEHRRHFPSCPF
CDGGLRCWESGDDPWVEHAKWFPRCEFLIRMKGQEFVDEIQGRYPHLLEQLLSTSDTTGE
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PS50143; BIR_REPEAT_2;
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Pred. No. 4.
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chi; Muridae; Murinae; Rat
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                                                                                                                          Query Match
Best Local S
Matches 353
                                                                                                                                                                                                     Q8UWD2;
Q8UWD2;
01-MAR-2002
01-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Brachydanio rerio (Zebrafish)
Eukaryota; Metazoa; Chordata;
Actinopterygii; Neopterygii; T
Cyprinidae; Danio.
NCBI_TaxID=7955;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Submitted (NOV-2001) to the EMBL/GenBank/DDBJ EMBL; AF442500; AAL33679.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Genes with
zebrafish.";
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MEDLINE=20373792; PubMed=10917738;
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Cenes with homology to mammalian apoptosis regulators identified
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                                     Death Differ.
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KVKCFCCGLMLDNWKLGDSPIQKHKQLYPSCSFIQNL-VSASLGSTSKNT-SPMRNSFAH
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                                                                                                                                              Similarity
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IPR001315; CARD.
IPR001841; Znf_ring.
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2 (TrEMBLrel.
2 (TrEMBLrel.
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                                                                                                                          Conservative
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                                                                                                                       55.9%; Score 1833; DB 13; 56.1%; Pred. No. 3.5e-121; tive 101; Mismatches 141;
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21,
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Last sequence update)
Last annotation update)
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                                                                                                                                                                                                            5B68CEB6A87C8A95 CRC64;
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                                                                                                                       Gaps
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                                                                                                                                Query Match
Best Local S
Matches 242
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InterPro; IPR001370; BIR.
InterPro; IPR001370; BIR.
Pfam: PF00653; BIR; 3.
PROSITE; PS01282; BIR_REPEAT_1; UNKNOWN_3.
PROSITE; PS01282; BIR_REPEAT_2; 3.
PROSITE; PS01283; BIR_REPEAT_2; 3.
PROSITE; PS01283; BIR_REPEAT_2; 3.
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Eukaryota; Metazoa; Ch
Mammalia; Eutheria; Ro
NCBI_TaxID=10090;
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                                                                                                                                Local Similarity 66.7 les 242; Conservative
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   MVQDSAFLAKLMKSADTFELKYDFSCELYRLSTYSAFPRGVPVSERSLARAGFYYTGVND
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Rodentia;
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                                                                                                                                    49;
                                                                                                                                Score 1318; D
Pred. No. 4.1e
19; Mismatches
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                                                                                                                                4.1e-85;
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Best Local S
Matches 206
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SMART; SM00338; BIR; 3.
SMART; SM00338; BIR, REPEAT_1; 1
PROSITE; PS01282; BIR, REPEAT_2; 3
PROSITE; PS50143; BIR_REPEAT_2; 3
NON_TER 324 324
SEQUENCE 324 AA; 36567 MW. EP.
                                                                                                                                                                                                                                                                           Pendleton C.N., Bargmann W.J., Varadarajan J., Bose H.R. "The apoptosis inhibitor ch-IAP1 is a direct transcriptive-Rel and c-Rel.";
Submitted (OCT-2000) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                 01-MAR-2001 (TrEMBLrel. 16, 01-MAR-2001 (TrEMBLrel. 16, 01-DEC-2001 (TrEMBLrel. 19, Apoptosis inhibitor ch-IAPI
                                                                                                                                                                                                                                                                                                                                                                Gallus gallus (Chicken)
Eukaryota; Metazoa; Cho
                                                                                                                                                                                                                                                                                                                                                                          Apoptosis inhibitor Gallus gallus (Chick
                                                                                                                                                                                                                                                                                                                                                                                                               Q9DDN2;
01-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                   Q9DDN2
                                                                                                                                                                                                                                                EMBL; AF311289; AAG42316.1;
HSSP; Q13490; 1QBH.
InterPro; IPR001370; BIR.
                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                       Archosauria;
                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=9031;
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180
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                                   QDKVKCFSCGLVLDNWQPGDNAMEKHKQVYPSCSFVQNMLSLNNLGLSTHSAFSPLVASN
                                                                                                                                SIMEDSTILSDWTNSNKQ--KMKYDFSCELYRMSTYSTFPAGVPVSERSLARAGFYYTGV
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                                                                                  NDKYKCFCCGLMLDNWKLGDSPIQKHKQLYPSCSFIQNLVSA-SLG-ST-----SKN
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                                                                                                                                                            Similarity
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                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                   PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                       Aves;
                                                                                                                                                                                                                                                                                                                                                       ; Chordata; Craniata; Vertebrata; Euteleostomi; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                            34.7%; Score 1138.5; 63.4%; Pred. No. 1.6
                                                                                                                                                                                                                                                                                                W.J., Varadarajan J., Bose H.R. Jr., ch-IAP1 is a direct transcriptional
                                                                                                                                                                                                                                                                                                                                                                                  49;
                                                                                                                                                                                         5E2B89DEAE3733F3 CRC64;
                                                                                                                                                   ore 1138.5; DB 13; Length ed. No. 1.6e-72; Mismatches 55; Indels
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Best Local S
Matches 173
            O9EQO5 PRELIMINARY; PRY
Q9EQO5;
Q1-MAR-2001 (TrEMBLrel. 16, Creat
O1-MAR-2001 (TrEMBLrel. 21, Last
O1-JUN-2002 (TrEMBLrel. 21, Last
Inhistor of apoptosis protein 3
Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata; Cri
Mammalia; Eutheria; Rodentia; Sc:
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01-NOV-1998
01-JUN-2002
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NON_TER
SEQUENCE
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STRAIN-WISTAR; TISSUE-OVARY;
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NCBI_TaxID=10116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bradley C.K., Lareu R.R., Dharmarajan A.M., "Cloning and characterisation of an inhibitor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=10116;
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                                                                                                                                                                                                                                                                                 MRTFLYWPSSVLVQPEQLASAGFYYVDHNDDVKCFCCDGGLRCWEPGDDPW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        tch 28.9%; Score 945.5; DB 11; al Similarity 74.9%; Pred. No. 4.2e-59; 173; Conservative 18; Mismatches 33;
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E; PS50143; BIR_REPEAT_2;
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224 AA;
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                  Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Rat
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Murinae; Rat
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Best Local S
Matches 204
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InterPro: IPRO01841; Znf_ring.
Pfam; PF00653; BIR; 3.
Pfam; PF00097; Zf-C3HC4; 1.
SMART; SM00238; BIR; 3.
SMART; SM00284; RING; 1.
   Q9EQ04
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Lareu R.R., Bradley C.K., Lacher M., Friis R.R., Dharmarajan A.M.;
"Cloning, characterization and regulation cf an inhibitor of apoptosis protein in the rat corpus luteum.";
Submitted (SEP-2000) to the EMBL/GenBank/DDBJ databases.
-!-SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
EMBL; AF30433; AAG41192.1; -.
HSSP; Q13499; 10BH.
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SEQUENCE FROM
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Query Match
Best Local
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InterPro; IPRO01841; Znf_ring.
Pfam; PF00653; BIR; 3.
Pfam; PF00097; zf-C3HC4; 1.
SMART; SM00238; BIR; 3.
SMART; SM001844; RING; 1.
PROSITE; PS01282; BIR_REPEAT_1; 2.
PROSITE; PS01282; BIR_REPEAT_2; 3.
Zinc-finger.
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01-MAR-2001 (TrEMBLrel. 16, Created)
01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
Inhibitor of apoptosis protein 3.
Rattus norvegicus (Rat).
EuKaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rat'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
STRAIN-WISTAR; TISSUE-OVARY;
LARGU R.R., Bradley C.K., Lacher M., Friis
"Cloning, characterization and regulation o
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[1]
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                  TTGENYKTVNDIVSALLNAEDEKREEEKEKQAEEMASDDLSLIRKNRMALFQQLTCVLPI 478
                                                                                                                                                                                                                                     LGESVVRTAEKT-----PSVTKKIDDTIFQNPMVQEAIRMGFNFKDIKKTMEEKLQ
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of an inhibitor of
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apoptosis
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pfam; PF00053; BIR; 3.
Pfam; PF00097; zf-C3HC4; 1.
SMART; SM00238; BIR; 3.
SMART; SM00184; RING; 1.
PROSITE; PS01282; BIR_REPEAT_1; 2.
PROSITE; PS0143; BIR_REPEAT_2; 3.
Zinc-finger:
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Q9ESFO;
Q1-MAR-2001 (TrEMBLrel. 16, Created)
Q1-MAR-2001 (TrEMBLrel. 16, Last sequence update)
Q1-MAR-2002 (TrEMBLrel. 21, Last annotation update)
Q1-JUN-2002 (TremBLrel. 21, Last annotation update)
Inhibitor of apoptosis protein 3.
Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -!- SIMILARITY: CONTAINS 1 RIN EMBL; AF183429; AAG22969.1; -. HSSP; Q13490; 1QBH.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Holcik M., Lefebvre C.A., Hicks K., Korneluk R.G.;
"Cloning and Characterization of the Rat Homologs of the
Apoptosis Protein 1, 2, and 3 Genes.";
Submitted (SEP-1999) to the EMBL/GenBank/DDBJ databases.
-!- SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
                             419
                                                                                                                                                                                                                                                   178
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477 VDKCPMCCTVI 487
                                                            347
                                                                                           359
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                                                                                                                                                      299
                                                                                                                                                                                     238
                                                                                                                                                                                                                    251
                                                                                                                                                                                                                                                                            198 FLSPSELARAGFYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCPFL-----
                                                                                                                                                                                                                                                                                                              129 ----LDRPSETHADYL-----LRTGQVVDISDT-IYPRNPAMCSEEARPKTFQNWPDYA 177
                                                                                                                                                                                                                                                                                                                                         139 LSPTLEHSSLFSGSYSSLSPNPLNSRAVEDISSSRTNPYSYAMSTEEARFLTYHMWP-LT
 398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                        16 DTNKDE---EFVEEFNRLKTFANFPSSSPVSASTLARAGFI/ITGEGDTVQCFSCHAAVDR 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                           GRNDDVKCFCCDGGLRCWESGDDPWVEHAKWFPRCEFLIRMKGQEFVDEIQGRYPHLLEQ 358
                                                                                                                                                                                                                                                TTGENYKTVNDIVSALLNAEDEKREEEKEKQAEEMASDDLSLIRKNRMALFQQLTCVLPI 478
                                                                            LLSTSDTTGEENADPPIIHFGPGESSSEDAVMMNTPVVKSALEMGFNRDLVKQTVQSKIL 418
                                                                                                                     GEGDKYKCFHCGGGLTDWKPSEDPWEQHAKWYPGCKYLLDEKGQEYINNI-----HLTHS
                                                                                                                                                                                    RSESGYSSDRNFPNSTNSPR----NPAMAEYDARIVTFGTWIYS--VNKEQLARAGFYAL
                                                                                                                                                                                                                 -----ENSLETLRFSISNLSMQTHAARMRTEMYWPSSVPVQPEQLASAGFYYV
TSGSNYLSLEVLIADLYSAQKDNSQDE
                                                          LGESVVRTAEKT - - - - - -
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                                                            - PSVTKKIDDTIFQNPMVQEAIRMGFNFKDIKKTMEEKLQ
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424
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	Qy 303 DVKCFCCDGGLRCWESGDDPWVEHAKWFPRCEFLIRMKGQEFVDEIQGRYPHLLEQLLST 362	
	238 TDSICAELGRSCLNNEQHPRNPSMAEYERRIQTFLAWIYPVNKEHLAEAGFYSTGNGD	
	LETLRESIS	
	Qy 200 SPSELARAGEYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCPFLENS 253	
	Db 125 SALEDLSDVEADYLLRTRQVVDMSDT-LYPKNPAMCSEEARLKSFHNWPPYGLL 177	
	QY 141 PTLEHSSLFSGSYSSLSPNPLNSRAVEDISSSRTNPYSYAMSTEEARFLTYHMW-PLTFL 199	
	Db 70 VEGWEPGDSAIDRHKNLSPDCRFITGSAFLENNVHPLVQSHQHRTENGSSNLALP 124	
	DNWKLGDSPIQKHKQLYPSCSFIQNLVSASLGS	
	Qy 30 DWTNSNKQKMKYDFSCELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLM 89	
18	Query Match 27.3%; Score 894; DB 13; Length 493; Best Local Similarity 34.5%; Pred. No. 5.4e-55; Matches 210; Conservative 77; Mismatches 150; Indels 172; Gaps	
	SEQUENCE 493 AA; 55251 MW; 0307	
	SMART; SM00238; BIR; 3. SMART; SM00184; RING; 1.	
	RL Submitted (NOV-2001) to the EMBL/GenBank/DDBJ databases. DR EMBL; AF451854; AAL47170.1;	
	"Identification of chicken inhibitor of apopto (IAP3).";	
	SEQUENCE FROM N.A. Bridgham J.T., Johnson A.L.;	
	Gallus.	
	IAP3.	
	<pre>01-JUN-2002 (TrEMBLrel. 21, Last Inhibitor of apoptosis protein 3.</pre>	
	01-MAR-2002 (TrEMBLrel. 20, Created) 01-MAR-2002 (TrEMBLrel. 20, Last sequence up	
	DBUVF8;	
	RESULT 12 QBUVEB TD ORIVEB PRETINIVARY. DPT. 403 AA	
	CCI	
	Qy 599 LRKCPICRGIIKGTVRTFL 617	
	Db 432KDISTEEQLERLQEEKLCKICMDENIAIVEVPCGHLVTCKQCAEA 476	
	Qy 539 LFVDKNMKYIPTEDVSGLSLEEQLRRLQEERTCKVCMDKEVSVVFIPCGHLVVCQECAPS 598	
	Db 425 SSQTSLQ 431	
	Qy 479 LDNLLKANVINKQEHDIIKQKTQIPLQARELIDTILVKGNAAANIFKNCLKEIDSTLYKN 538	

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Q9IA69;
01-OCT-2000
01-OCT-2000
01-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PROSITE;
PROSITE;
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SEQUENCE
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01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
01-DEC-2010 (TrEMBLrel. 19, Last annotation update)
Inhibitor of apoptosis i (Fragment).
Gallus gallus (Chicken).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     specific genes.";
poult. Sci. 80:284-288(2001).
EMBL; AF221083; AAF35320.1; -.
HSSP; Q13490; 1QBH.
InterPro; IPR001370; BIR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRAIN-BREED FAYOUMI; TISSUE-SPLEEN; MEDLINE-21158006; PubMed-11261557; Zhou H., Liu W., Lamont S.J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pfam; PF00653; BIR; 2.
SMART; SM00238; BIR; 2.
SMOSITE; PS01288; BIR REPEAT 1;
PROSITE; PS50143; BIR_REPEAT_2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=9031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
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182
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                                                                                                                                                                                                                      KNMKYIPTEDVSGLSLEEQLRRIQEERTCKVCMDKEVSVVFIPCGHLVVCQECAPSLRKC
                                                                                                                    RTFMYWPSSVPVQPEQLASAGFYYVGRNDDVKCFCCDGGLRCVESGDDWVEHAKWFPRC 333
                                                                                                                                                                                                                                                                                                                        SLSPNPLNSRAVEDISSSRTNPYSYAMSTEEARFLTYHMWPLTFLSPSELARAGFYYIGP 214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PI-CRGIIK
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EYLLRVKGGEFVSQVQ 197
                                           EFLIRMKGQEFVDEIQ 349
                                                                                                                                                                                               ADKVACFTCGGQLSNWEPKDNAMSEHRRHFPNCPFVENLMRD\\PSFNVSNVTMQTHEARV
                                                                                                                                                                                                                                                                                              SFPQDPVTTRAAEDLSHLRSKLHNPSMSTEEARLRTFHAWPLMFLSPTELAKAGLYYLGT 61
                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
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197 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                   33;
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.es 28;
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Matches 133;
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Best Local !
STRAIN-BERKELEY;
Stapleton M., Br
                                                                                                                                                                            Drosophila melanogaster (Fruit fly).
Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;
Pterygota; Neoptera; Endopterygota; Diptera; Brachycera; Musc
Ephydroidea; Drosophilidae; Drosophila.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; AF221082; AAF35319.1; -HSSP; Q13490; IQBH.
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"Genetic variation among chicken lines specific genes.";
Poult. Sci. 80:284-288(2001).
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STRAIN-BREED LEGHORN; TISSUE-SPLEEN;
MEDLINE-21158006; PubMed-11261557;
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01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
Inhibitor of apoptosis 1 (Fragment).
Gallus gallus (Chicken).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
British Aves; Neognathae; Galliformes; Phasianidae; Phasianidae
                                                                                                                                                                                                                                                                                                                                                                                             01-DEC-2001 (TrEMBLrel. 19, 01-DEC-2001 (TrEMBLrel. 19, 01-MAR-2002 (TrEMBLrel. 20,
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                                                                         SEQUENCE FROM N.A.
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                                                                                                                                           NCBI_TaxID=7227;
                                                                                                                                                                                                                                                                                                                               IAP2 OR CG8293.
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Last sequence
Last annotation
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   Agbayani
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           Carlson
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Best Local Similarity
Matches 182; Conserv
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Pfam; PF00097; zf-C3HC4; 1.
PROSITE; PS01282; BIR_REPEAT_1; UNKNOWN_3.
PROSITE; PS50143; BIR_REPEAT_2; 3.
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LIDTILVKGNAAANIFKNCLKEIDSTLYKNLFVDKNMKYIPTEDVSGLSLEEQLRRLQEE 568
                                                                                                                         EEMASDDLSLIRKNRMALFQQLTCVLPILDNLLKANVINKQI:HDIIKQKTQIPL--QARE 508
                                                                                                                                                                           MNTPVVKSALEMGFNRDLVKQTVQSKILTTGENYKTVNDIVSALLNAEDEKREEEKEKQA 450
                                                                                                                                                                                                    PKCQFVLLAKGPAYVSEV------LAT--TAANASSQPAT---APAPTLQADVLM
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                                                 -----AVANISK------ITDEIQKMSVATPNGNLSLEEENRQLKDA 448
                                                                                                  EPSA----PFIEPCQATTSKAASVPIPVADS-------IPAKPQAAE 412
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Search completed: May Job time: 156.94 secs

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4 US-08-69-023-29
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Matches
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                                                                    1 CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKLGDSP 55
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ALIGNMENTS	US-08-511-485-20	US-08-511-485-21	US-09-493-784-22	US-08-836-134-22	US-08-511-485-28	US-08-511-485-26	US-08-511-485-27	PCT-US95-05922A-2	US-09-617-053A-10	US-08-800-929A-10	US-09-212-971-10	US-08-511-485-10		US-09-617-053A-4	US-08-800-929A-4	US-09-212-971-4	US-08-511-485-4	US-08-511-485-17	
	Sequence 20, Appl	Sequence 21, Appl	Sequence 22, Appl	•	Sequence 28, Appl	26,	Sequence 27, Appl	Sequence 2, Appli	Sequence 10, Appl		Sequence 10, Appl		Sequence 16, Appl	Sequence 4, Appli	Sequence 4, Appli	Sequence 4, Appli	Sequence 4, Appli	Sequence 17, Appl	

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; MOLECULE TYPE: US-08-569-749-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 5, Application US/08569749
Patent No. 6187557;
GENERAL INFORMATION:
APPLICANT: Rothe, Mike
APPLICANT: Goeddel, David V
TITLE OF INVENTION: INHIBITORS OF
               Query Match
Best Local
                                                                                                                                                                                               TELEPHONE: (415)781-1989
TELEFAX: (415)398-3249
INFORMATION FOR SEQ ID NO: 5
                                                                                                     SEQUENCE CHARACTERISTICS:
LENGTH: 55 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                              ATTORNEY/AGENT INFORMATION:
NAME: BIEZNET, DAVID J.
REGISTRATION UNMBER: 24,774
REFERENCE/DOCKET NUMBER: A-
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STREET: 4 Embarcadero
CITY: San Francisco
STATE: California
COUNTRY: USA
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                                                                                                                                                                                                                                                                                                                                              CLASSIFICATION:
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                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER:
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linear
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Score 307; DB 4;
Pred. No. 4.9e-37;
; Mismatches 0;
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                               Length 55
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 100.0%;
Best Local Similarity 100.0%;
Matches 55; Conservative (
                                                                                                                                                                                                                                                                                                                         Patent No.
                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEFAX: (415)398-324: INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              equence 5, Application PC/TUS9612860 GENERAL INFORMATION:
                                                                                                                                                                                                                                                  APPLICANT:
APPLICANT:
APPLICANT:
       ZIP: 02110-2804
ZIP: 02110-2804
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
MEDIUM TYPE: IBM PC compati
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME: Brezner, David J.
REGISTRATION NUMBER: 24,774
REFERENCE,DOCKET NUMBER: A-
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION: INHIBITORS OF APOPTOSIS NUMBER OF SEQUENCES: 14
CORRESPONDENCE ADDRESS:
                                                                                                                                                                            CORRESPONDENCE ADDRESS
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                                                                                                                                                                                                                TITLE OF INVENTION:
                                                                                                                                                                                                 TUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 55 amino acids
TYPE: amino acid
STRANDEDNESS: single
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDIUM TYPE:
 OPERATING SYSTEM:
                                                                                      COUNTRY:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: U.S.
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                                                                                                                                                             ADDRESSEE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                1 CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCGGLMLDNWKLGDSP 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKLGDSP 55
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5. 5919912
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San Francisco
                                                                                                                          Boston
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                                                                                                                                         3: Fish & Richardson P.C
225 Franklin Street
                                                                                      USA
                                                                                                                                                                                                                                                      Baird, Stephen
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                                                                                                                                                                                                                                                                   Mackenzie,
                                                                                                                                                                                                                                                                                     Korneluk, Robert G
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linear
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PC-DOS/MS-DOS
                                                                                                                                                                                                            MAMMALIAN IAP GENE FAMILY, PRIMERS, PROBES, AND DETECTION METHODS
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                                                                                                                                                                                                                                                               Alexander E.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 307; DB 5;
Pred. No. 4.9e-37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 55;
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US-08-800-929A-8
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              RESULT 5
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                                                                                                                                                                                                                                  SEQ ID NO 8
LENGTH: 618
TYPE: PRT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 100.0%; Score 307; DB 2; Best Local Similarity 100.0%; Pred. No. 9.1e-36; Matches 55; Conservative 0; Mismatches 0;
                                                                                                                                                                Query Match
                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION NUMBER: US/09/212,9 CURRENT FILING DATE: 1998-12-16 EARLIER APPLICATION NUMBER: 60/017,354 EARLIER FILING DATE: 1996-04-26 EARLIER APPLICATION NUMBER: 60/030,590 EARLIER APPLICATION NUMBER: 60/030,590 EARLIER FILING DATE: 1996-11-14
                                                                                                                                                                                                                                                                                                  EARLIER APPLICATION NUMBER: 08/800,929
EARLIER FILING DATE: 1997-02-13
NUMBER OF SEQ ID NOS: 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Tsang, Benjamin K
APPLICANT: Pratt, Christine
                                                                                                                                                                                                                                                                                    SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE OF INVENTION: NAIP FOR THE DIAGNOSIS AND TREATMENT OF PROLIFERATIVE TITLE OF INVENTION: DISEASE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: DETECTION AND MODULATION OF IAPS AND
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ATTORNEY/AGENT INFORMATION:
NAME: Clark, Paul T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELECOMMUNICATION INFORMATION: TELEPHONE: 617/542-5070
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STRANDEDNESS: no
TOPOLOGY: both
                                                                                                                                                 Local
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                                                                                              1 CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKLGDSP 55
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                                                               1 Similarity
55; Conser
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                                                                                                                                Score 307; DB 3; Pred. No. 9.1e-36; Mismatches 0;
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                                                                                                                                                              Length 618;
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Best Local Similarity 100.
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                                                                                                                           tent No.
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SÖFTWARE: FastSEQ for Windows Version
CURRENT APPLICATION DATA:
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PRIOR APPLICATION NIMBER: 60/030,590
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MEDIUM TYPE: Diskett
                                                                               APPLICANT:
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                                CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE OF INVENTION: DISEASE
                                               NUMBER OF SEQUENCES:
                                                          APPLICANT: Goeddel, David V
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                                                                                                                                                                                                                     45 CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKLGDSP 99
                                                                                                                                                                                                                                                                                                                                                                                            STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEFAX: 617-428-7045
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FILING DATE: 14-NOV-1
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                                                                                                                                                                                                                                      1 CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKLGDSP 55
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   STREET:
                DDRESSEE:
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E: FLEHR, HOHBACH, TEST, ALBRITTON & HERBERT 4 Embarcadero Center, Suite 3400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   176 Federal Street
                                                                                              Rothe, Mike
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Pred. No. 9.1e-36;
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                         PRIOR FILING DATE: 1997-02-13
                                                                                                                                                                                                                                      CURRENT APPLICATION NUMBER: US/09/617,053A CURRENT FILING DATE: 2000-07-14
                                                                                                                                                                                                                                                                                 TITLE OF INVENTION: DETECTION AND MODULATION TITLE OF INVENTION: NAIP FOR THE DIAGNOSIS & TITLE OF INVENTION: DISEASE
                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                NUMBER OF SEQ
                                                                                                                                                                                                                                                                  FILE REFERENCE:
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                                                                                                                         LENGTH: 618
TYPE: PRT
ORGANISM: Homo sapiens
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELECOMMUNICATION INFORMATION:
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Local Similarity 100.0%;
es 55; Conservative (
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             1 CELYRMSTYSTFPAGYPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKLGDSP 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LENGTH:
CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKLGDSP 99
                                                                                                                                                                                                                                                                                                                                                                                                                  INFORMATION:
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5. 6300492
                                                                                                                                                                                  FastSEQ for Windows Version 4.0
                                                                    Similarity
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Brezner, David J.
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Conservative (
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                                                                                                                                                                                                                                                                                                                                          Benjamin K
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                                                     Score 307; DB 4;
Pred. No. 9.1e-36;
Mismatches 0;
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; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-069-023-29
; MOLECULE TYPE:
PCT-US96-12860-2
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Best Local Similarity 100.
55; Conservative
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                                                                                                             TELEFAX: (415)398-3249
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CURRENT APPLICATION NUMBER: US/09/069,023A CURRENT FILING DATE: 1998-04-27, NUMBER OF SEQ ID NOS: 38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Inohara, Naohiro
APPLICANT: Koseki, Takeyoshi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR IDENTIFYING APOPTOSIS TITLE OF INVENTION: SIGNALING PATHWAY INHIBITORS AND ACTIVATORS FILE REFERENCE: UM-03333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Nunez, Gabriel
                                                                                                                                                                  REFERENCE/DOCKET NUMBER: A-TELECOMMUNICATION INFORMATION: TELEPHONE: (415)781-1989
                                                                                                                                                                                                                                                                   CLASSIFICATION:
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION DATA: APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
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                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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                                    TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                    CLASSIFICATION:
                                                  STRANDEDNESS:
                                                                                           LENGTH:
                                                                                                                                                                                                                               NAME: Brezner, David J. REGISTRATION NUMBER: 24,774
                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER:
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b. 6348573
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Query Match

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US-08-569-749-6
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Best Local Similarity
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INFORMATION FOR SEQ
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CLASSIFICATION:
ATTORNEY/AGENT INFORMATION:
NAME: Brezner, David J.
NAME: Brezner, 24,774
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TELECOMMUNICATION INFORMATION:
TELEPHONE: (415)781-1989
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SOFTWARE: PatentIn Relu
CURRENT APPLICATION DATA:
COMPUTER READABLE FORM:
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TITLE OF INVENTION:
NUMBER OF SEQUENCES:
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LENGTH: 55 amino acids
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CORRESPONDENCE ADDRESS:
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COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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                                                                                             DDRESSEE:
                                                 TT: 4 Embarcadero Center, Suite 3400
San Francisco
California
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VENTION: INHIBITORS OF APOPTOSIS
                                                                                                                                                          TULARIK, INC
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Pred. No. 3.
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i; Mismatches 0;
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3.6e-36;
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US-08-511-485-6
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Best Local Similarity
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                                                                                           FILING DATE: 04-AUG-1995
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: Clark, Paul T.
REGISTRATION NUMBER: 30,162
REFERENCE/DOCKET NUMBER: 0754
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL
        TELEFAX: 617/542-8906
TELEX: 200154
INFORMATION FOR SEQ ID NO:
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MEDIUM TYPE: Floppy disk
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                                                                                                                                                                                                                SOFTWARE: PatentIn Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS:
ADDRESSEE: Fish & Ri
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Korneluk, Robe
APPLICANT: Mackenzie, Ale
APPLICANT: Baird, Stephen
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SEQUENCE CHARACTERISTICS:
                                                                              TELECOMMUNICATION INFORMATION:
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CLASSIFICATION:
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TOPOLOGY: 11
                                                               TELEPHONE:
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                                                                                                                                                                                                                                                 IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
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98.2%;
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Lin Street
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Pred. No. 3.6e-36;
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                                                                                                                                                                                                                                                               RESULT 14
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LENGTH: 604
                                                                                                                                                                                                                Patent No.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION NUMBER: US/09/212,971B CURRENT FILLING DATE: 1998-12-16 EARLIER APPLICATION NUMBER: 60/017,354 EARLIER FILING DATE: 1996-04-26 EARLIER APPLICATION NUMBER: 60/030,590 EARLIER FILING DATE: 1996-11-14
                                                                                                                                                                                                GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: DETECTION AND MODULATION OF IAPS AND TITLE OF INVENTION: MAIP FOR THE DIAGNOSIS AND TREATMENT OF PROLIFERATIVE TITLE OF INVENTION: DISEASE FILE REFERENCE: 07891/009002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Tsang, APPLICANT: Pratt,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Korneluk, Robert G
APPLICANT: MacKenzie, Alexand
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EARLIER FILING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EARLIER APPLICATION NUMBER: 08/800,929
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Liston, Peter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: PRT
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APPLICANT:
                                               TITLE OF INVENTION:
TITLE OF INVENTION:
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STRANDEDNESS: not
TOPOLOGY: both
                                                                                                                                                                                                                                                                                                               28 CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKRGDSP 82
                                                                                                                                                                                                                                                                                                                                                                                            Local
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Pratt, Christine
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                  ADDRESS:
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                                                                                                                               Stephen
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98.2%;
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RESULT 15
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FILING DATE: 13-FEB-1997
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 60/030,590
FILING DATE: 14-NOV-1996
APPLICATION NUMBER: 60/017,354
FILING DATE: 26-APR-1996
                                                                                                                                                                                                                                                                                                                                                                                                equence 4, Application US/08569749 tent No. 6187557 SENERAL INFORMATION:
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SEQUENCE CHARACTERISTICS:
LENGTH: 604 amino acid
                                                                                     SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/569,749
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: Brezner, David J.
REGISTRATION NUMBER: 24,774
                                                                                                                                                                                         COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                              CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                     APPLICANT: Rothe, Mike
APPLICANT: Goeddel, David V
TITLE OF INVENTION: INHIBITORS OF APOPTOSIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRANDEDNESS:
TOPOLOGY: lir
MOLECULE TYPE:
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ATTORNEY/AGENT INFORMATION:
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                                                                                                                                                                                                                                                                                                                               UMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                             STREET: 4 Embarcadero Center, Suite 3400
CITY: San Francisco
STATE: California
                                                                         FILING DATE:
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SOFTWARE: FastSEO for Windows Version
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Pred. No. 6.4e-35;
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                                                                                                                           MOLECULE TYPE: protein
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TELECOMMUNICATION INFORMATION:
28 CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKRGDSP 82
                                                      Local Similarity 98.7 es 54; Conservative
                                                                                                                                           TOPOLOGY:
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             1 CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKIGDSP 55
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                                                    Score 301; DB 4; Pred. No. 6.4e-35; D; Mismatches 1
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Search completed: May 5, 2003, 16:09:09 Job time: 4.73848 secs

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Result
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length: 2000000000
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 Query Match Best Local Similarity Matches 46; Conserv

100.0%; ilarity 100.0%; Conservative 0;

Score 269; DB 4; Pred. No. 4.3e-28; ; Mismatches 0;

Length 46;

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Gaps

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RESULT 1 US-08-569-749-7 US-08-569-749-7 Sequence 7, Application US/08569749 Patent No: 6187557 GENERAL INFORMATION: APPLICANT: Rothe, Mike APPLICANT: Rothe, Mike APPLICANT: Rothe, Mike APPLICANT: Rothe, Mike APPLICANT: Rothe, Mike APPLICANT: Rothe, Mike APPLICANT: Rothe, Mike APPLICANT: Rothe, Mike APPLICANT: Rothe, Mike APPLICANT: Rothe, Mike APPLICATION US/08/569,749 FILING DESCRIPTION LIMITATION US/08/569,749 FILING DATE:	28 241 89.6 600 4 US-09-617-053A-12 Sequence 12, 29 192 71.4 68 2 US-08-511-485-21 Sequence 21, 30 192 71.4 497 2 US-08-511-485-21 Sequence 4, 4 31 192 71.4 497 3 US-09-212-971-4 Sequence 4, 4 32 192 71.4 497 4 US-08-800-929A-4 Sequence 4, 4 32 192 71.4 497 4 US-08-800-929A-4 Sequence 4, 7 33 192 71.4 497 4 US-08-617-053A-4 Sequence 4, 7 34 187 69.5 496 2 US-08-511-485-10 Sequence 10, 36 187 69.5 496 4 US-09-212-971-10 Sequence 10, 38 187 69.5 496 4 US-09-212-971-10 Sequence 10, 39 155 57.6 236 4 US-09-121-979-4 Sequence 10, 39 155 57.6 236 4 US-09-121-979-4 Sequence 4, 7 41 155 57.6 236 4 US-09-33-819-2 Sequence 4, 7 42 151 56.1 66 2 US-08-511-485-25 Sequence 25, 42 150 55.8 66 2 US-08-511-485-25 Sequence 25, 42 150 55.8 66 2 US-08-811-485-24 Sequence 26, 7 42 151 56.1 236 4 US-09-339-867-4 Sequence 27, 7 56 28 151 236 4 US-09-339-867-4 Sequence 27, 7 56 28 151 236 4 US-09-339-867-4 Sequence 27, 7 56 28 151 236 4 US-09-339-867-4 Sequence 27, 7 56 28 151 236 2 US-08-811-485-24 Sequence 27, 7 56 28 151 236 2 US-08-811-485-24 Sequence 27, 7 56 28 151 236 2 US-08-811-485-24 Sequence 27, 7 56 28 151 236 2 US-08-811-485-24 Sequence 27, 7 56 28 151 236 2 US-08-811-485-24 Sequence 27, 7 56 28 151 236 2 US-08-811-485-24 Sequence 27, 7 56 28 151 2 US-08-811-485-24 Sequence 27, 7 56 28 151 2 US-08-811-485-24 Sequence 27, 7 56 28 151 2 US-08-811-485-24 Sequence 27, 7 56 28 151 2 US-08-811-485-24 Sequence 27, 7 56 28 151 2 US-08-811-485-24 Sequence 27, 7 56 28 151 2 US-08-811-485-24 Sequence 27, 7 56 28 151 2 US-08-811-485-24 Sequence 27, 7 56 28 151 2 US-08-811-485-24 Sequence 27, 7 56 28 151 2 US-08-811-485-24 Sequence 27, 7 56 28 151 2 US-08-811-485-24 Sequence 27, 7 56 28 151 2 US-08-811-485-24 Sequence 27, 7 56 28 151 2 US-08-811-485-24 Sequence 27, 7 56 28 151 2 US-08-811-485-24 Sequence 27, 7 56 28 151 2 US-08-811-485-24 Sequence 27, 7 56 28 151 2 US-08-811-485-24 Sequence 27, 7 56 28 151 2 US-08-811-485-24 Sequence 27, 7 56 28 151 2 US-08-811-485-24 Sequence 27, 7 56 28 151 2 US-08-811-485-24 Sequence 27, 7 56 28 1
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                                                                                                                                                                                                                                                                                                   Sequence 23, Application US/08511485 Patent No. 5919912
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
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GENERAL INFORMATION:
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: FLOPPY DOS/MS-DOS
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                                                                                                                                                                                                TILE OF INVENTION: MAMMALIAN IAP GENE FAMILY, PRIMERS, TILE OF INVENTION: PROBES, AND DETECTION METHODS
                                                                                                                                                                                                                                         PPLICANT:
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                                                                                        COUNTRY:
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                                                                                        USA
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Baird, Stephen
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                                                                                                                                                                                                                                                                    Korneluk, Robert G
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                                                                                                      TELEFAX: 201-994-1744 INFORMATION FOR SEQ ID NO: 2:
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OPERATING SYSTEM: MS-DOS
SOFTWARE: WORD PERFECT 5.1
CURRENT APPLICATION DATA:
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NAME: Clark, Paul T.
REGISTRATION NUMBER: 30,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: HE, ET AL.
TITLE OF INVENTION: H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELECOMMUNICATION INFORMATION: TELEPHONE: 617/542-5070
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                                                                                      SEQUENCE CHARACTERISTICS:
                                                                                                                                              TELECOMMUNICATION INFORMATION
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ATTORNEY/AGENT INFORMATION:
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TOPOLOGY: LI
                                                                                                                                                             NAME: FERRARO, GREGORY D.
REGISTRATION NUMBER: 36,134
REFERENCE/DOCKET NUMBER: 32
                                                                                                                                                                                                                                                                      CLASSIFICATION:
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                                                        AMINO ACID
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E: CECCHI, STEWART
6 BECKER FARM ROAD
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Pred. No. 6.4e-28;
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US-08-511-485-8
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US-08-511-485-8
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Matches 46
                                                                                                  US-09-212-971-8
                                                                                                               RESULT
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Patent No.
                                                                   Sequence 8, Application US/09212971B Patent No. 6107041
                                                                                                                                                                                                                            Query Match
Best Local Similarity
                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                  TELEX: 200154
INFORMATION FOR SEQ ID NO: 8:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: Patentin Rel
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                               NAME: Clark, Paul T.
REGISTRATION NUMBER: 30,162
REFERENCE/DOCKET NUMBER: 07
TELECOMMUNICATION INFORMATION:
TELLEPHONE: 617/542-5070
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
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NAME: Clark, Paul T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS:
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                                                                                                                                                        204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
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                                                                                                                                                                                                                                                                                                              LENGTH: 618 amino acids TYPE: amino acid STRANDEDNESS: not releva
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                                                                                                                                                                       1 LARAGFYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCPF 46
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                                                                                                                                                     LARAGFYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCPF 249
                                                         INFORMATION:
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Liston,
Baird, S
                                            Korneluk,
                             MacKenzie, Alexander E
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   225 Franklin Street
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                                                                                                                                                                                                                                                                                                                                                                                                  617,
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                 Peter
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100.0%; S
tive 0;
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Pred. No. 6.8e-27;
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; ORGANISM: Homo sapiens US-09-212-971-8
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LENGTH: 618
TYPE: PRT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 8,
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CURRENT FILING DATE: 1998-12-16
EARLIER APPLICATION NUMBER: 60/017,354
EARLIER FILING DATE: 1996-04-26
EARLIER APPLICATION NUMBER: 60/030,590
EARLIER FILING DATE: 1996-11-14
EARLIER FILING DATE: 1996-11-14
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TITLE OF INVENTION: DETECTION AND MODULATION OF IAPS AND
TITLE OF INVENTION: NAIP FOR THE DIAGNOSIS AND TREATMENT OF PROLIFERATIVE
TITLE OF INVENTION: DISEASE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EARLIER APPLICATION NUMBER: EARLIER FILING DATE: 1997-02
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TITLE OF INVENTION:
                                                                                                                                                                                                                                           OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Diskett
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                            APPLICATION NUMBER: 60/017,354
FILING DATE: 26-APR-1996
ATTORNEY/AGENT INFORMATION:
NAME: Bieker-Brady, Kristina
                                                                                                                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS:
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                                                                                                                                                                                                                                                                                                                                                      COUNTRY: USA
ZIP: 02110
                                                                                                                                    APPLICATION NUMBER: 60/030,590 FILING DATE: 14-NOV-1996
                                                                                                                                                                                        CLASSIFICATION:
                                                                                                                                                                                                          APPLICATION NUMBER: US/0 FILING DATE: 13-FEB-1997
                                  REGISTRATION NUMBER: 07891/009001
                                                                                                                                                                                                                                                                                                                                                                                                                                           DDRESSEE:
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176 Federal Street
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Pratt, Christine
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MacKenzie, Alexander
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Korneluk, Robert G
                                                                                                                                                                                                                                                                                               IBM Compatible
                                                                                                                                                                                                                                                                                                                 Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER: 08/800,929
1997-02-13
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                                                                                                                                                                                                                                                                                                                                                                                                                                             Elbing LLP
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Pred. No. 6.8e-27;
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NFORMATION FOR SEQ ID NO:

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RESULT 9
US-09-617-053A-8
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Sequence 8, Application US/09617053A Patent No. 6300492
                                                                                                                                              Matches
                                                                                                                                                                           Query Match
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MEDIUM TYPE: Floppy disk
COMPUTER: IEM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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                                                                                    204 LARAGEYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHEPNCPF 249
                                                                                                                                                                                                                                                                                                                                                                NAME: Brezner, David J.
REGISTRATION NUMBER: 24,774
REFERENCE/DOCKET NUMBER: A-
                                                                                                                                                             Local Similarity
                                                                                                                                                                                                                                    TOPOLOGY:
                                                                                                                                                                                                                                               STRANDEDNESS:
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                                                                                                   1 LARAGFYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCPF 46
                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE:
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4 Embarcadero Center,
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Pred. No. 6.8e-27;
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Pred. No. 6.8e-27;
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                                                                                                                                             Mismatches
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RESULT 11
PCT-US96-12860-2
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                                                                                                                         Sequence 2, Application:
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Best Local Similarity
Matches 46; Conserv
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SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 29
LENGTH: 618
TYPE: PRT
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SEQ ID NO 8
LENGTH: 618
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 29, App. Patent No. 63485
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION NUMBER: US/09/617,0:
CURRENT FILING DATE: 2000-07-14
PRIOR APPLICATION NUMBER: US 08/800,929
PRIOR FILING DATE: 1997-02-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Nunez, Gabriel
APPLICANT: Inohara, Naohiro
APPLICANT: Koseki, Takeyoshi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Pratt, Christine
TITLE OF INVENTION: DETECTION AND MODULATION OF IAPS AND
TITLE OF INVENTION: NAIP FOR THE DIAGNOSIS AND TREATMENT OF PROLIFERATIVE
TITLE OF INVENTION: DISEASE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CURRENT APPLICATION NUMBER: US/09/069,023A CURRENT FILING DATE: 1998-04-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILE REFERENCE: UM-03333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR IDENTIFYING APOPTOSIS TITLE OF INVENTION: SIGNALING PATHWAY INHIBITORS AND ACTIVATORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQ ID NOS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Korneluk, Robert G
                                                   CORRESPONDENCE ADDRESS:
                                                                                         TITLE OF INVENTION:
                                                                                                         APPLICANT:
                                                                       NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                            204 LARAGEYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCPF 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 204 LARAGFYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCPF 249
                 STREET: 4
                                                                                                                                                                                                                                                             1 LARAGFYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCPF 46
                           ADDRESSEE:
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San Francisco
                                                                                                                                              Application PC/TUS9612860
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Pratt, Christine
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MacKenzie,
                                                                                                         TULARIK,
                                                                                                                                                                                                                                                                                                                     Conservative
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           FLEHR, HOHBACH, TEST, ALBRITTON & HERBERT Embarcadero Center, Suite 3400
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                                                                                         INHIBITORS OF APOPTOSIS
                                                                                                                                                                                                                                                                                                                               100.0%; Score 269; DB 4;
100.0%; Pred. No. 6.8e-27;
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Pred. No. 6.8e-27;
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COMPUTER READABLE FORM:

MEDIUM TYPE:

STATE: C

California

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                                                    ; ORGANISM: Mus musculus US-09-212-971-14
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Query Match
Best Local Similarity
                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/09/212,971B
CURRENT FILING DATE: 1998-12-16
EARLIER APPLICATION NUMBER: 60/017,354
EARLIER FILING DATE: 1996-04-26
EARLIER APPLICATION NUMBER: 60/030,590
                                                                                                                                                                 NUMBER OF SEQ ID
                                                                                                                                                                                   EARLIER FILING DATE: 1996-11-14
EARLIER APPLICATION NUMBER: 08/800,929
EARLIER FILING DATE: 1997-02-13
                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Tsang, Benjamin K
APPLICANT: Pratt, Christine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: MacKenzie, Alexander
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                  TILE OF INVENTION: NAIP FOR THE DIAGNOSIS TILE OF INVENTION: DISEASE TILE REFERENCE: 07891/009002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NPPLICANT: Korneluk, Robert G
                                                                                                                                                                                                                                                                                                                                                                                                                                               PPLICANT: Baird, Stephen
                                                                                                                                                                                                                                                                                                                                                                                           ITLE OF INVENTION: DETECTION AND MODULATION OF IAPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION DATA:
                                                                                                             ENGTH:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        204 LARAGFYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCPF 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
                                                                                                                               ID NO 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: PCT/
FILING DATE: 06 AUG 1996
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY: li
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REGISTRATION NUMBER: 24,774
REFERENCE/DOCKET NUMBER: A-
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   12-971-14
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Liston,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Application US/09212971B
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linear
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                                                                                                                                                Windows Version 4.0
 98.1%;
97.8%;
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Pred. No. 6.8e-27;
0; Mismatches 0;
 Score 264; DB 3; Pred. No. 3e-26;
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                                                                                                                                                                                                                                                                                                                                                                          AND TREATMENT OF PROLIFERATIVE:
                   Length 612;
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RESULT 14 US-08-569-749-14

; Sequence 14, Application US/08569749 β Patent No. 6187557

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US-08-800-929A-14
                                                                                                                         US-08-800-929A-14
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                                                                          Query Match
Best Local Similarity
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                                                                                                                                                                                                                                     NFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                  TELECOMMUNICATION INFORMATION: TELEPHONE: 617-428-0200
                                                                                                                                                                                                                                                                                                                                                                                                                                      CLASSIFICATION: 424
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM
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TITLE OF INVENTION:
                                                                                                                                                                                                                     SEQUENCE CHARACTERISTICS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT APPLICATION DATA:
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                                                                                                                                       MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PPLICANT:
197 LARAGEYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPHCPF 242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US/08/800,929A FILING DATE: 13-FEB-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version
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ZIP: 02110
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                                                                                                                                                                                                                                                                                                                            NAME: Bieker-Brady, Kristina REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/030,590 FILING DATE: 14-NOV-1996 APPLICATION NUMBER: 60/017,354
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                                                                                                                                                          TOPOLOGY:
                                                                                                                                                                      STRANDEDNESS:
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                 1 LARAGFYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCPF 46
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                                                              Conservative
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                                                                           98.1%;
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                                                                                                                                                                                                                                      14:
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                                                                             Score 264; DB 4
Pred. No. 3e-26;
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                                                              Mismatches
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                                                                                           Length 612;
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                                                                  Indels
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GENERAL INFORMATION:

Rothe, Mike

APPLICANT: NOTHE, MIKE
APPLICANT: GOEDEL, DAVID V
TITLE OF INVENTION: INHIBITORS OF APOPTOSIS
NUMBER OF SEQUENCES: 14

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; TYPE: PRT
; ORGANISM: Mus musculus
US-09-617-053A-14
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Best Local Similarity 97.8
Matches 45; Conservative
                                                           SOFTWARE: FASTSEQ
SEQ ID NO 14
LENGTH: 612
                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 14,
                                                                                                                                                                                                                                                                                                                                                                                                                             Patent No.
                                                                                                                                 CURRENT APPLICATION NUMBER: US/09/617,053A CURRENT FILLING DATE: 2000-07-14 PRIOR APPLICATION NUMBER: US 08/800,929 PRIOR FILING DATE: 1997-02-13
                                                                                                                                                                                                                                                                                                                                                                                                         ENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEFAX: (415)398-3249
INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
                                                                                                                   NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Korneluk, Robert G
                                                                                                                                                                                                          PPLICANT: Tsang, Benjamin K
PPLICANT: Pratt, Christine
TILE OF INVENTION: DETECTION AND MODULATION OF MAPS AND
TILE OF INVENTION: NAIP FOR THE DIAGNOSIS AND TREATMENT OF PROLIFERATIVE
TILE OF INVENTION: DISEASE
TILE REFERENCE: 07891/009003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MOLECULE TYPE: protein
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REFERENCE/DOCKET NUMBER: A-1
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415)781-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: Brezner, David J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       197 LARAGEYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHEPHCPF 242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STREET: 4 Embarcadero Center, Suite 3400
CITY: San Francisco
STATE: California
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 LARAGEYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCPF 46
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Baird, Stephen
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          612 amino acids
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linear
                                                                                               for Windows Version 4.0
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Pred. No. 3e-26;
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                                        Query Match
Best Local Similarity
                                 Matches
Conservative
                                        98.1%;
97.8%;
                                       Score 264; DB 4; Length 612; Pred. No. 3e-26;
                                 Mismatches
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                                Indels
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Search completed: May 5, 2003, 16:09:10 Job time: 3.12673 secs

GenCore version 5.1.4_p5_4578 Copyright (c) 1993 - 2003 Compagen Ltd.

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Minimum DB
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269
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/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA2001.DAT:*
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        AAW13549
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Human c-IAP1 repea
Human inhibitor of
Human inhibitor of
Human apoptosis in
Human c-IAP1 Hom
Human HIAP-2 prote
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Murine C-IAP. Mus
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149 149 149	154 151	1555	187 187 187	192 188 187	192 192	241 241 192	248 248 241	248 248	248 248	257 255 251 251
			69.5 59.5			89.6 89.6 71.4				94.8 94.8 93.3
1232 1295 1295	236 236 278	236	496 496	497 464 496	497 497	602 602 497	1140 1141 600	604 604	604	306 591 604
			18 19 23				19 23	20 20	18 18	18 18 19
AAR98217 AAY14080 AAY09540	AAU75066 AAE00367 AAO20511	AAY81440 AAE00365 AAE00366	AAW19584 AAW69297 ABG65666	ABG65663 AAU75747 AAW19745	AAW69294 AAY99985 AAY59451	AAW19585 ABG65667 AAW19581	AAU97837 AAB50694 AAW69298	AAW13546 AAY52703 AAY33997	ABG65664 AAW13550 AAW19747	AAU02925 AAW19586 ABG668 AAW19582 AAW19582
Neuronal apoptosis Gonadotropic hormo Human apoptosis in	Human testes speci Gorilla IAP-like p Protein of APP rel		tosis pro pitor	Human inhibitor of Human Inhibitor of Mouse inhibitor of		Mouse apoptosis in Mouse inhibitor of Human apoptosis in	יסינו די	Human c-IAP2. Hom Human cellular inh Human cellular inh	Human inhibitor of Human c-IAP2 repea Human inhibitor of	· · · · ·

ALIGNMENTS

AAW13549;

AAW13549 standard;

Protein;

46 ⋛

. 323.6 RESULT 1
AAW13549
ID AAW1
XX AAW1
AC AAW1
XC AAW1
XX Huma
XX Huma
XX IAP;
KW MYOO;
XX MO97
XX W097
XX W097
XX 06-1
XX 08-1
PF 08-1
PF 08-1
XX WPI
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XX WPI
XX WPI
XX WNC
PT use
PT use Nucleic acids encoding cellular inhibitor of apoptosis proteins useful for apoptosis regulation in cells to reduce or increase apoptosis and for pharmacological screening IAP; inhibitor; apoptosis; RING finger domain; restinosis; myocardial infarction; nephritis; HIV. WPI; 1997-154209/14. Goeddel DV, Rothe M; (TULA-) TULARIK INC. 08-DEC-1995; 08-AUG-1995; 06-AUG-1996; 20-FEB-1997. W09706182-A1. Homo sapiens Human c-IAP1 repeat 2 22-JUL-1997 (first entry) 95US-0569749. 95US-0512946. 96WO-US12860

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RESULT 2
AAW04583
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Best Local S
Matches 46
                                                                                                                                                                                                                           He WW, Hudson PL, Rosen CA;
                                                                                                                                                                                                                                                    (HUMA-) HUMAN
            septic shock, as an antiviral defence mechanism, and for preventing cell death during strokes or trauma. Its amino acid sequence was deduced from a cDNA clone (AAT43709) that can be obto
                                                        useful
                                                                                                 Claim 1; Page 40-41; 53pp; English
                                                                                                                          Polynucleotide encoding human inhibitor of apoptosis gene 1 - useful for treating degenerative diseases, as antiviral defence mechanism and preventing cell death during trauma and strokes
                                                                                                                                                                                       WPI; 1996-518608/51
N-PSDB; AAT43709.
                                                                                                                                                                                                                                                                                                                                                                                                           Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAW04583 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      repeats and/or a RING finger domain; in particular, at least two of a first domain repeat (AAW13547 or AAW13548), a second domain repeat (AAW13549 or AAW13550), and a third domain repeat (AAW13551 or AAW13552) and/or a RING finger domain (AAW13553 or AAW13554), or a consensus sequences derived from these human genes.

The nucleac acid is used for recombinant product of human cellular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim
                                                                                                                                                                                                                                                                                          11-MAY-1995;
                                                                                                                                                                                                                                                                                                                      11-MAY-1995;
                                                                                                                                                                                                                                                                                                                                                  14-NOV-1996
                                                                                                                                                                                                                                                                                                                                                                              W09635703-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                     rheumatoid arthritis; septic shock; antiviral; traum cell death; oncogenesis; cancer; diagnosis; therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                              Inhibitor of apoptosis 1; hIAP-1; degenerative disease; rheumatoid arthritis; septic shock; antiviral; trauma; stroke;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human inhibitor of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             07-FEB-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAW04583;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          inhibitor of apoptosis protein which modulates apoptosis regulation. The nucleic acids are useful in therapies where increased cell-specific apoptosis is desired. e.g. in restinosis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAT61590/T61591) comprise a series of defined structural domain repeats and/or a RING finger domain; in particular, at least two
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    inflammatory disease states, myocardial infarction, glomerular nephritis, transplant rejection and infections diseases, e.g. HIV. They can also be used in conditions requiring a reduction in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ш
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 LARAGFYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCPF 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           human cellular inhibitor of apoptosis proteins (c-IAP1/2
                                                                                                                                                                                                                                                                                                                                                                                                          sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LARAGFYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCPF
                                                                       inhibitor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ω.
                                                      for treating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Page
 Jurkat cell lines
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                                                                                                                                                                                                                                                             GENOME SCI INC.
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                                                                                                                                                                                                                                                                                          95WO-US05922
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                                                                       of.
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                                                                    apoptosis 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            apoptosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Protein; 438
                                                      degenerative diseases,
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 or human
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Pred. No. 1e-26;
                                                                    (hIAP-1) (AAW04583)
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osteoclastoma stromal
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                                                     rheumatoid
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                                                     a protein
arthritis,
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cell
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RESULT 3
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X T X D X P
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                   Mammalian IAP homologue B (MIHB) (AAW19746) is a human homologue of baculovirus inhibitor of apoptosis protein [IAP). Its amino acid sequence was deduced from a cDNA clone (see also AAT72711) isolated from a human foetal liver cDNA library using primers based on human EST sequences that resembled the BIR repeats of Orygia pseudotsuguta polyhedrosis virus IAP. IAP homologues (see also AAW19745 and AAW19747-52) and their derivatives and chemical analogues can be used in methods for modulating apoptosis in animal cells, specifically for treatment, by inhibition, of degenerative and specifically for treatment.
                                                                                                                                                       Claim 8; Page 51-54; 136pp; English.
                                                                                                                                                                              Isolated protein homologues of viral inhibitors of apoptosis to modulate apoptosis for treatment of degenerative, infectious autoimmune diseases and cancer
                                                                                                                                                                                                                                    WPI; 1997-350966/32.
N-PSDB; AAT72711.
                                                                                                                                                                                                                                                                                                                                                                                  03-JUL-1997.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           lines. Recombinant hIAP-1 can be produced in eukaryotic host cells, or expressed in vivo. to screen for modulators of hIAP-1 activity.
                                                                                                                                                                                                                                                                                                                             22-DEC-1995;
                                                                                                                                                                                                                                                                                                                                                        20-DEC-1996;
                                                                                                                                                                                                                                                                                                                                                                                                           WO9723501-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cancer; therapy; diagnosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAW19746 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                   (AMRA-) AMRAD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Region
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           16-SEP-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAW19746;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Inhibitor of apoptosis protein; IAP; mammalian IAP homologue; degenerative disease; infectious disease; autoimmune disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human inhibitor of apoptosis protein homologue MIHB
            nfectious
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nilarity 100.
Conservative
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                                                                                                                                                                                                                                                                                                     OPERATIONS PTY LTD
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/lahc'
                                                                                                                                                                                                                                                                                                                                                                                                                                     /label= RING_finger
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                            abel- BIR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Protein; 618
                                                                                                                                                                                                                                                                                                                                                                                                                                                    606
           by promotion, of
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Pred. No. 1.1e-2
); Mismatches
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It can also
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              69
                                                                                                                                                                                               infectious
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             438;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g o
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RESULT 4
AAW19583
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Human XIAP, HIAP-1 and HIAP-2 and murine M-XIAP, M-HIAP-1 and M-HIAP-2 (AAM19581-86) are a new class of mamualian proteins that are inhibitors of apoptosis (IAP) and which axe characterised by the presence of a ring zinc finger domain (see also AAW19587) and at least one BIR (baculovirus IAP repeat) domain (see also AAW19587). The HIAP amino acid sequences were deduced from cDNA clones (AAT70837 and AAT70838) from a human liver library. IAP polypeptides can be expressed in host cells (in vitro or in vivo) and used in methods for treating diseases and disorders involving apoptosis, esp. in a human diagnosed as HIV-positive or as having AIDS, a neurodegenerative disease, a myelodysplastic syndrome or an ischaemic injury, seleted from myocardial infarction, stroke,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Apoptosis inhibitor; HIAP-2; HIV; AIDS; neurcdegeneration; myelodysplastic syndrome; ischaemia; myocardial infarction reperfusion injury; toxin-induced liver disease; gene ther
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                          Nucleic acid encoding an inhibitor of apoptosis polypeptide to inhibit apoptosis in e.g. HIV or AIDS patients, and for of susceptibility to apoptotic disease
                                                                                                                                                                                                                                                                                                                                    22-DEC-1995;
04-AUG-1995;
                                                                                                                                                                      Claim
                                                                                                                                                                                                                                                             WPI; 1997-154262/14.
                                                                                                                                                                                                                                                                                                                                                                            05-AUG-1996;
                                                                                                                                                                                                                                                                                                                                                                                                      20-FEB-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human apoptosis inhibitor HIAP-2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            diagnosis.
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                                                                                                                                                                     27; Page 75-77;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     46;
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                                                                                                                                                                                                                                                                                  Korneluk RG,
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                                                                                                                                                                                                                                                                                                                                    950S-0576956
950S-0511485
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                                                                                                                                                                                                                                                                                                                                                                                                                                                   /label= Ring_zinc_finger
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /label= BIR-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /label= BIR-2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%;
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                                                                                                                                                                   219pp; English.
                                                                                                                                                                                                                                                                                   Liston P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    618
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                                                                                                                                                                                                                                                                                     Mackenzie
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J. 1.6e-25;
O;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  infarction; stroke;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gene therapy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
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1 LARAGFYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCPF

Best Local Matches Query Match

l Similarity 46; Conser

100.0%; llarity 100.0%; Conservative (

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Score 269; DB 18; Pred. No. 1.6e-25; Mismatches 0;

Indels Length

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RESULT 5
AAW13545
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Best Local S
Matches 46
                                                                                                                             The human cellular inhibitor of apoptosis proteins (c-IAP1/2-AAT61590/T61591) comprise a series of defined structural domain repeats and/or a RING finger domain: in particular, at least two of a first domain repeat (AAW13547 or AAW13548), a second domain repeat (AAW1359 or AAW13550), and a third domain repeat (AAW1351 or AAW13552) and/or a RING finger domain (AAW13553 or AAW13554), or a consensus sequences derived from these human genes.

The nucleic acid is used for recombinant prodn. of human cellular
                                        nephritis, tra
They can also
                                                                                                                                                                                                                                                                Disclosure; Page 18-20; 35pp; English.
                                                                                                                                                                                                                                                                                          Nucleic acids encoding cellular inhibitor of apoptosis proteins useful for apoptosis regulation in cells to reduce or increase apoptosis and for pharmacological screening
                                                                                                                                                                                                                                                                                                                                                                                                                                                          08-DEC-1995;
08-AUG-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IAP; inhibitor; apoptosis; RING finger domain;
myocardial infarction; nephritis; HIV.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAW13545
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   reperfusion injury,
Sequence
                                                                                 inhibitor of apoptosis protein which modulates apoptosis regulation. The nucleic acids are useful in therapies where increased cell-specific apoptosis is desired, e.g. in restinguishments.
                                                                                                                                                                                                                                                                                                                                                        N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                  Goeddel DV,
                                                                                                                                                                                                                                                                                                                                                                                                                              (TULA-) TULARIK INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       06-AUG-1996;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human c-IAP1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  22-JUL-1997
                                                                    inflammatory disease states, myocardial infarction,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     204 LARAGFYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCPF
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DB; AAT61590.
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618
                                         transplant
lso be used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       618 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
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95US-0512946.
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                                         rejection and infectious diseases, in conditions requiring a reduction
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     toxin-induced liver disease
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Pred. No. 1.6e-25;
; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          restinosis;
                                           reduction
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               46
                                                                       glomerular
                                                                                     restinosis,
                                           e.g. HIV.
m in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            618;
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RESULT 7
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AAW69296
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                                                                                                                                                                                                         This sequence is the human HIAP-2 protein, which is a inhibitor of capoptosis protein (IAP), and can be used in the method of the invention. The method is for enhancing apoptosis in cells from a mammal with proliferative disease by treatment with a compound that inhibits biological activity of an IAP or NAIP polypeptide. The inhibitory compounds are used to treat proliferative diseases, specially cancers of covary, breast, pancreas, lymph nodes, skin, blood, lung, brain, kidney, it rectum, cervix or endometrium, particularly to increase their sensitivity to chemotherapeutic agents. High levels of the IAP or NAIP proteins are detected in many cancers and are associated with poor prognosis, cresistance to chemotherapeutic agents and mutations in p53 (it is suggested that wild-type p53 suppresses transcription of the IAP or NAIP compact contains are used for testing the effects of antisense oligonucleotides and for screening for the inhibitors.
                                                                                                                                  Query Match
Best Local Similarity
Matches 46; Conserv
            AAY33998 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Inducing apoptosis in proliferative mammalian cells with inhibitor of IAP or NAIP polypeptide - also methods for prognosis based on presence of IAP and NAIP, specifically applied to cancers involving
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Baird
                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                  Disclosure; Fig 3; 147pp; English
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                                                                                          LARAGFYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCPF 46
                                                                              LARAGEYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCPF
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                                                                                                                                                                                        618
                                                                                                                                  Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             apoptosis
disease;
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            Protein; 618
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                                                                                                                                            100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein; apoptosis enhancer; NAIP polypeptide;
IAP; therapy; cancer; human; HIAP-2 protein.
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Pred. No. 1.6e-25;
Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pratt C;
                                                                                                                                 Indels
                                                                                                                                                         Length
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RESULT 8
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                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                         The invention provides antisense compounds of 8-30 nucleotides that inhibit the expression of human Cellular Inhibitor of Apoptosis-1 (c-IAP-1). The antisense compounds may be used for diagnostics, therapeutics (for modulating the expression of c-IAP-1), prophylaxis (e.g. to prevent or delay infection, inflammation, or tumor formation), as research reagents (e.g. to distinguish between members of a biological pathway) and in kits. The present sequence represents the human cellular inhibitor of apoptosis-1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Cellular Inhibitor of c-IAP-1; prophylaxis;
                                                                      pancreatic cancer; embryonic development; viral pathogenesis; autoimmune disorder; neurodegenerative disease; multiple sclerosis; lupus erythematosus; herpes virus infection; pox virus infection; adenovirus infection; proliferative disease.
                                                                                                                                                             Human inhibitor of apoptosis,
                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 1999-561047/47.
N-PSDB; AAZ22143.
                                                                                                                        Human; antisense; inhibitor of apoptosis; HIAP1; HIAP2;
cytostatic; cancer; ovarian cancer; adenocarcinoma; lymp
                                                                                                                                                                                                                                         ABG65665 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Example 13; Columns 41-46;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Antisense compounds complementary to Cellular Inhibitor of Apoptosis-1 useful for e.g. diagnostics, therapeutics, and as research reagents -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  03-DEC-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          03-DEC-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   28-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US5958772-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human cellular inhibitor of apoptosis-1 sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAY33998;
                                                 Homo
                                                                                                                                                                                      26-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (ISIS-) ISIS PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         26-NOV-1999
                                                                                                                                                                                                                                                                                                    Local Similarity
                                                                                                                                                                                                                                                                                                                                                       46;
                                                                                                                                                                                                                                                                                                                                                     100.
ilarity 100.
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                        618 AA;
                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Cowsert LM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  98US-0205204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          98US-0205204.
                                                                                                                                                                                                                                         Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Apoptosis-1; antisense; diagnostic; therapeutic; infection; inflammation; tumor formation.
                                                                                                                                                                                                                                                                                                                                                                               .0%;
                                                                                                                                                                                                                                                                                                                                                                   .08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ackermann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              32pp;
                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                     Score 269; DB 20;
Pred. No. 1.6e-25;
; Mismatches 0;
                                                                                                                                                               HIAP2
                                                                                                                                                                                                                                         A
                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EJ;
                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                      249
                                                                                                                         Lymphoma;
                                                                                                                                                                                                                                                                                                                                                                               618;
                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                     Gaps
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WO200226968-A2

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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                composition comprising a mammalian IAP antisense molecule and a method of enhancing apoptosis in a cell, comprising administering a negative regulator of the IAP anti-apoptotic pathway to the cell. The IAP antisense inhibitor is useful for enhancing apoptosis in a cell in a mammal diagnosed with a proliferative disease. The method is useful for treating a patient diagnosed with a proliferative disease like cancer. The IAP antisense molecule is useful to treat, ameliorate, improve, sustain or prevent proliferative diseases (e.g. ovarian cancer, sustain or prevent proliferative diseases (e.g. ovarian cancer, conditions where apoptosis is involved or implicated (e.g. embryonic development, viral pathogenesis, autoimmune disorders, neurodegenerative diseases, multiple sclerosis, lupus erythematosus and infection by herpes virus, pox virus and adenovirus). The present sequence is a human IAP
            08-DEC-1995;
08-AUG-1995;
                                                       06-AUG-1996;
                                                                                                               W09706182-A1
                                                                                                                                                                    IAP; inhibitor; apoptosis; RING finger domain; restinosis; myocardial infarction; nephritis; HIV.
                                                                                                                                                                                                                   Murine c-IAP
                                                                                                                                                                                                                                              22-JUL-1997
                                                                                                                                                                                                                                                                                                   AAW13555 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The invention relates to an inhibitor of apoptosis (IAP) antisense nucleic acid (I) that inhibits IAP biological activity, regardless length of the antisense nucleic acid, the IAP proteins may be mouse or human XIAP, HIAP1 or HIAP2. Also included are a pharmaceutical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Novel antisense inhibitor of apoptosis nuclei: acid useful for enhancing apoptosis in a cell, for treating cancer and other proliferative diseases -
                                                                                  20-FEB-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Disclosure; Fig 3; 135pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Korneluk RG,
                                                                                                                                                                                                                                                                                                                                                                        28-SEP-2000; 2000US-0672717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     27-SEP-2001; 2001WO-CA01379
                                                                                                                                                                                                                                                                                                                                                                                                                                    46;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         UNIV OTTAWA.
AEGERA THERAPEUTICS INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            618 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%; ilarity 100.0%; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Lacasse
                                                                                                                                                                                                                                           (first entry)
            95US-0569749.
95US-0512946.
                                                      96WO-US12860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ħ
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                                                                                                                                                                                                                                                                                                    612
                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 269; DB 23;
Pred. No. 1.6e-25;
                                                                                                                                                                                                                                                                                                    ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Holcik M,
                                                                                                                                                                                                                                                                                                                                                                                                                                   3
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                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 618;
                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
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RESULT 10
AAW69299
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Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ANT61590/T61591) comprise a series of defined structural domain repeats and/or a RING finger domain; in particular, at least two of a first domain repeat (AAW13540), and a third domain repeat (AAW13551 or AAW13552) and/or a RING finger domain (AAW13533 or AAW13551 or AAW13552) and/or a RING finger domain (AAW13553 or AAW13551 or AAW13552) and/or a RING finger domain (AAW13553 or AAW13554), or a consensus sequences derived from these human genes.

The nucleic acid is used for recombinant prodn. of human cellular inhibitor of apoptosis protein which modulates apoptosis regulation. The nucleic acids are useful in therapies where increased cell-specific apoptosis is desired, e.g. in restinosis, inflammatory disease states, myocardial infarction, glomerular nephritis, transplant rejection and infectious diseases, e.g. HIV.

They can also be used in conditions requiring a reduction in
Inducing apoptosis in proliferative mammalian cells with inhibitor of IAP or NAIP polypeptide - also methods for prognosis based on
                                                  WPI; 1998-467164/40
N-PSDB; AAV55043.
                                                                                                                                                                                                                        13-FEB-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   13-NOV-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Nucleic acids encoding cellular inhibitor of apoptosis proteins useful for apoptosis regulation in cells to reduce or increase apoptosis and for pharmacological screening
                                                                                                                        Baird
                                                                                                                                                                                          13-FEB-1997;
                                                                                                                                                                                                                                                            20-AUG-1998.
                                                                                                                                                                                                                                                                                              W09835693-A2
                                                                                                                                                                                                                                                                                                                             ds sp
                                                                                                                                                                                                                                                                                                                                                               Inhibitor of apoptosis protein; apoptosis enhancer; NAIP polypeptide; proliferative disease; IAP; therapy; cancer; mouse; HIAP-2 protein.
                                                                                                                                                                                                                                                                                                                                                                                                               Murine HIAP-2 protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAW69299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAW69299 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The human cellular inhibitor of apoptosis proteins (c-IAP1/2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Disclosure; Page 28-29; 35pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (TULA-) TULARIK INC
                                                                                                                                                        (UYOT-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                apoptosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 LARAGFYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCPF 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LARAGEYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPHCPF 242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1997-154209/14.
                                                                                                      ä,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              l Similarity
45; Conserv
                                                                                                                                                          UNIV OTTAWA.
                                                                                                                        Korneluk R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              612 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                          97US-0800929
                                                                                                                                                                                                                            98WO-IB00781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          98.1%;
97.8%;
                                                                                                                        Liston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 264; DB 18;
Pred. No. 6.6e-25;
1; Mismatches 0
                                                                                                                        ָש
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                                                                                                                        Mackenzie
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 612;
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RESULT 11
AAU02925
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Best Local S
Matches 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                proliferative disease by treatment with a compound that inhibits biological activity of an IAP or NAIP polypeptide. The inhibitory compounds are used to treat proliferative diseases, specially cancers of ovary, breast, pancreas, lymph nodes, skin, blood, lung, brain, kidney, liver nasopharnyx, thyroid,central nervous system, prostate, colon, rectum, cervix or endometrium, particularly to increase their sensitivity to chemotherapeutic agents. High levels of the IAP or NAIP proteins are detected in many cancers and are associated with poor prognosis, resistance to chemotherapeutic agents and mutations in p53 (it is suggested that will-type p53 suppresses transcription of the IAP or NAIP genes). Transgenic animals are used for testing the effects of antisense oligonucleotides and for screening for the inhibitors.
                                                                                                                                                                                                                                                                                                                                                       vasoactive intestinal polypeptide receptor 2; arteriosclerosis; cancer; myocardial infarction; coronary arterial thromhosis; renal disease; diabetic nephropathy; muscular disease; immune disorder; sarcoidosis; multiple sclerosis; immune complex nephritis; deep vein thrombosis; nonarcoidotic pulmonary granulomatous disease; endothelial abnormality; vascular disorder; asbestosis.
Novel alternative splicing variants e.g. variant of angiotensin converting enzyme (ACEV), useful in identifying candidate compo
                                                   WPI; 2001-336004/35
N-PSDB; AAS06025.
                                                                                                                                                                                                                      17-NOV-2000; 2000WO-IL00766
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Angiotensin converting enzyme splice variant; ACEV; interleukin 6; granulocyte colony stimulating factor receptor: glucagon; hypertrophy; platelet-derived endothelial cell growth factor; cardiovascular disease; cellular tumour antigen P53; cyclin-dependent kinase inhibitor IC;
                                                                                                                                                                    17-NOV-1999;
10-DEC-1999;
                                                                                                                                                                                                                                                         25-MAY-2001
                                                                                                                                                                                                                                                                                         WO200136632-A2
                                                                                                                                                                                                                                                                                                                           HOMO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 12-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAU02925 standard; Protein; 306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The method is for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Disclosure; Fig 6; 147pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   presence of IAP
p53 mutations
                                                                                                    Levine
                                                                                                                                      (COMP-) COMPUGEN LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Angiotensin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAU02925
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      197
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 LARAGFYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHNPPNCPF 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LARAGEYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPHCPF 242
                                                                                                    2,
                                                                                                   David A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              converting
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        is the murine HIAP-2 protein, which is a inhibitor of tein (IAP), and can be used in the method of the inventor enhancing apoptosis in cells from a mammal with
                                                                                                                                                                    99IL-0132978
99IL-0133455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               and NAIP, specifically applied to
                                                                                                    Azar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    98.1%;
97.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              enzyme (ACEV) splice variant protein #25
                                                                                                   Ļ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 264; DB Pred. No. 6.6e 1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1;
                                                                                                    Khosravi
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                                                                                                   ₽,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 19;
.6e-25;
                                                                                                    Berns tein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
 candidate compounds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 612;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cancers involving
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
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capable
                                                           Claim
                                                           4.
                                                                    of binding to the variant
                                                           Fig
                                                           25;
                                                          519pp;
                                                           English.
                                                                    and to
                                                                    detect anti-variant antibodies
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The sequence represents an angiotensin converting enzyme splice variant (ACEV) polypeptide. The polypeptides of the invention include variants of granulocyte colony stimulating factor receptor, glucagon, interleukin 6, platelet-derived endothelial cell growth factor, cyclin-dependent kinase inhibitor IC, cellular tumour antigen P3, and vasoactive intestinal polypeptide receptor 2. The polypeptides and their associated nucleic acids are useful for identification of variant sequences and detection of candidate compounds capable of binding the molecules. The sequences of the invention can be used in the treatment and diagnosis of various disorders including cardiovascular diseases such as arteriosclerosis, such as diabetic nephropathy, muscular diseases such as hypertrophy, cancer, sarcoidosis, nonarcoidotic pulmonary granulomatous diseases such as asbestosis and vascular pathologies involving an endothelial abnormality such as deep vein thrombosis Of. Of

Sequence 306 AA;

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204

1 LARAGFYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCPF 46 LARAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPNCPF

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Query Match
Best Local S
Matches 44
  44;
          Similarity
  Conservative
          95.5%;
95.7%;
Score 257; DB Pred. No. 2.4e 1; Mismatches
 1;
         257; DB 22;
No. 2.4e-24;
                   Length 306;
  Indels
  0,
 Gaps
  0
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RESULT 12 AAW19586 Mouse apoptosis inhibitor M-HIAP-2. 02-SEP-1997 AAW19586 AAW19586 standard; (first entry) Protein; 591 æ

diagnosis.

reperfusion

Apoptosis inhibitor; M-HIAP-2; HIV; AIDS; neurodegeneration; myelodysplastic syndrome; ischaemia; myocardial infarction;

stroke

toxin-induced liver disease;

Mus sp Domain Кеу Location/Qualifiers

Domain Domain Domain 241..308 156.. /label= abel-_abel= abel= BIR-3 578 Ring_zinc_finger BIR-1

22-DEC-1995; 04-AUG-1995; 05-AUG-1996; 20-FEB-1997. WO9706255-A2 95US-0576956 95US-0511485 96WO-IB01022

Baird S, Korneluk RG, Liston ď Mackenzie ΑE;

(UYOT-) UNIV OTTAWA

WPI;

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RESULT 13
ABG65668
В
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Best Local
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                                                                      WPI; 200
N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human XIAP, HIAP-1 and HIAP-2 and murine M-XIAP, M-HIAP-1 and M-HIAP-2 (AAW19581-86) are a new class of mammalian proteins that are inhibitors of apoptosis (IAP) and which are characterised by the presence of a ring zinc finger domain (see also AAW19587) and at least one BIR (baculovirus IAP repeat) domain (see also AAW19588). The M-HIAP amino acid sequences were deduced from isolated m-hiap cDNA clones (AAT70840-41). IAP polypeptides can be expressed in host cells (in vitro or in vivo) and used in methods for treating
            Novel antisense inhibitor of apoptosis nucleic acid useful for enhancing apoptosis in a cell, for treating cancer and other proliferative diseases
                                                                                                                                                                                                                                                                                                                                        Mouse; antisense; inhibitor of apoptosis; HIAP1; HIAP2; XIAP; cytostatic; cancer; ovarian cancer; adenocarcinoma; lymphoma; IAP; pancreatic cancer; embryonic development; variathogenesis; autoimmune disorder; neurodegenerative disease; multiple sclerosis; lupus erythematosus; herpes virus infection; pox virus infection; adenovirus infection; proliferative disease.
                                                                                                                                                                                                                                                                                                             Mus sp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 30; Page 100-102;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Nucleic acid encoding an inhibitor of apoptosis polypeptide -
to inhibit apoptosis in e.g. HIV or AIDS patients, and for det
of susceptibility to apoptotic disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N-PSDB;
                                                                                                                                                                                                                                                     04-APR-2002
                                                                                                                                                                                                                                                                                 WO200226968-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               26-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ABG65668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ABG65668 standard; Protein; 591
                                                                                                                                                                                          28-SEP-2000; 2000US-0672717.
                                                                                                                                                                                                                        27-SEP-2001;
                                                                                                                                                             (UYOT-) UNIV OTTAWA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               176 LARAGFYYIGPGDRVACFACGGKLSNWEPKDYAMSEHRRHFPHCPF 221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 iseases and disorders involving apoptosis, esp. in a human liagnosed as HIV-positive or as having AIDS, as neurodegenerative isease, a myelodysplastic syndrome or an ischaemic injury, seleted from myocardial infarction, stroke, reperfusion injury, or a toxin-induced liver disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
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DB; AAT70841.
                                                                      2002-479562/51.
DB; ABK93874.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  inhibitor of
                                                                                                                                               AEGERA THERAPEUTICS INC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      591 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                      2001WO-CA01379
                                                                                                                   Lacasse
                                                                                                                                                                                                                                                                                                                                                                                                                                              apoptosis, HIAP2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        94.8%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          219pp; English
                                                                                                                   Baird
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 255; DB 18;
Pred. No. 8.7e-24;
1; Mismatches 1
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                                                                                                                 Holc1k
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                                                                                                                 Young
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 591;
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Best Local
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                                                                                                                                                                                                                       antisense inhibitor is useful for enhancing apoptosis in a cell in a mammal diagnosed with a proliferative disease. The method is useful for treating a patient diagnosed with a proliferative disease like cancer. The IAP antisense molecule is useful to treat, ameliorate, improve, sustain or prevent proliferative diseases (e.g. ovarian cancer, adenocarcinoma, lymphoma, pancreatic cancer,) and also in diseases or conditions where apoptosis is involved or implicated (e.g. embryonic development, viral pathogenesis, autoimmune disorders, neurodegenerative diseases, multiple sclerosis, lupus erythematosus and infection by herpes virus, pox virus and adenovirus). The present sequence is a mouse IAP
                                                                                                                                                                                                                                                                                                                                                                                                                              length of the antisense nucleic acid, the IAP proteins may be mouse or human XIAP, HIAP1 or HIAP2. Also included are a pharmaceutical composition comprising a mammalian IAP antisense molecule and a method enhancing apoptosis in a cell, comprising administering a negative regulator of the IAP anti-apoptotic pathway to the cell. The IAP
                                                                                                                                                                  Sequence
                                                                                                                                                                                                          protein
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The invention relates
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leic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ention relates to an inhibitor of apoptosis (IAP) antisense acid (I) that inhibits IAP biological activity, regardless
                                                                                                       Similarity
                                                                                                                                                                                                          sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Fig 6; 135pp; English
                                                                                    Conservative
                                                                                                                                                                  ĄĄ,
                                                                                                       94.8%;
95.7%;
                                                                                  Score 255; DB 23;
Pred. No. 8.7e-24;
1; Mismatches 1
                                                                                                                        Length 591;
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RESULT 14
AAW19582
377
WPI; 1997-154262/14
                Baird
                                                22-DEC-1995;
04-AUG-1995;
                                                                                          20-FEB-1997.
                                                                                                                                                   Domain
                                                                                                                                                                                             Key
                                                                                                                                                                                                              Homo sapiens.
                                                                                                                                                                                                                                       Apoptosis inhibitor; HIAP-1; HIV; AIDS; neurodegeneration; myelodysplastic syndrome; ischaemia; myocardial infarction; stroke; reperfusion injury; toxin-induced liver disease; gene therapy;
                                                                                                                                                                                                                                                                        Human apoptosis inhibitor HIAP-1.
                                                                                                                                                                                                                                                                                                          AAW19582;
                                                                                                                                                                                                                                                                                                                           AAW19582 standard; Protein; 604 AA
                                (UYOT-)
                                                                         05-AUG-1996;
                                                                                                          WO9706255-A2
                                                                                                                                   Domain
                                                                                                                                                                     Domain
                                                                                                                                                                                     Domain
                                                                                                                                                                                                                                                                                          02-SEP-1997
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                                UNIV
              Korneluk RG,
                                OTTAWA.
                                                                                                                                                                                                                                                                                        (first entry
                                               95US-0576956.
95US-0511485.
                                                                         96WO-IB01022
                                                                                                                                                                                    Location/Qualifiers 29..96
                                                                                                                                                   /label- BIR-2
255..322
                                                                                                                                                                     /label- BIR-1
169..235
                                                                                                                          /label= Ring_zinc_finger
                                                                                                                                            /label= BIR-3
                Liston
                ָט
                Mackenzie AE;
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RESULT 15
AAW69295
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human XIAP, HIAP-1 and HIAP-2 and murine M-XIAP, M-HIAP-1 and M-HIAP-2 (AAM/19581-86) are a new class of mammalian proteins that are inhibitors of apoptosis (IAP) and which are characterised by the presence of a ring zinc finger domain (see also AAW/19587) and at least one BIR (baculovirus IAP repeat) domain (see also AAW/19588). The HIAP amino acid sequences were deduced from cDNA clones (AAT/0837) and AAT/0838) from a human liver library. IAP polypeptides can be expressed in host cells (in vitro or in vivo) and used in methods for treating diseases and disorders involving apoptosis, esp. in a neurodegenerative disease, a myelodysplastic syndrome or an ischaemic injury, seleted from myocardial infarction, stroke, reperfusion injury, or a toxin-induced liver disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Nucleic acid encoding an inhibitor of apoptosis polypeptide - used to inhibit apoptosis in e.g. HIV or AIDS patients, and for detection of susceptibility to apoptotic disease
                                                               Inducing apoptosis in proliferative mammalian calls with inhibitor of IAP or NAIP polypeptide - also methods for prognosis based on presence of IAP and NAIP, specifically applied to cancers involving p53 mutations
                                                                                                                                                                                                                                                                       13-FEB-1998;
                                                                                                                                                                                                                                                                                                                              WO9835693-A2
                                                                                                                                                                                                                                                                                                                                                                               Inhibitor of apoptosis protein; apoptosis enhancer; NAIP polypeptide;
proliferative disease; IAP; therapy; cancer; human; HIAP-1 protein. '
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 27; Page 72-74; 219pp; English.
                                     Disclosure; Fig 2; 147pp; English.
                                                                                                                                                                          Tsang
                                                                                                                                                                                        Baird
                                                                                                                                                                                                                                              13-FEB-1997;
                                                                                                                                                                                                                                                                                                   20-AUG-1998.
                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                          Human HIAP-1
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                                                                                                                                  1998-467164/40.
DB; AAV55039.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                43;
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43; Conservative
                                                                                                                                                                                       Korneluk R,
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                                                                                                                                                                                                                                                                                                                                                                                                                          protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                            97US-0800929
                                                                                                                                                                                                                                                                       98WO-IB00781.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Protein;
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93.5%;
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Pred. No. 2
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                                                                                                                                                                                       Mackenzie AE,
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2.9e-23;
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                                                                                                                                                                                       Pratt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 604;
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This sequence is the human HIAP-1 protein, which is a inhibitor of apoptosis protein (IAP), and can be used in the method of the inve-

invention

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The method is for enhancing apoptosis in cells from a mammal with proliferative disease by treatment with a compound that inhibits biological activity of an IAP or NAIP polypeptide. The inhibitory compounds are used to treat proliferative diseases, specially cancers of ovary, breast, pancreas, lymph nodes, skin, blood, lung, brain, kidney, liver nasopharnyx, thyroid,central nervous system, prostate, colon, rectum, cervix cr endometrium, particularly to increase their sensitivity to chemotherapeutic agents. High levels of the IAP or NAIP proteins are detected in many cancers and are associated with poor prognosis, resistance to chemotherapeutic agents and mutations in p53 (it is suggested that wild-type p53 suppresses transcription of the IAP or NAIP genes). Transgenic animals are used for testing the effects of antisense
Sequence
                                                           oligonucleotides and for screening for the inhibitors.
   604 AA;
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δÃ Matches Query Match Best Local Local Similarity Conservative 93.3%; Score 251; Pred. No. 2 Mismatches DB 19; .9e-23; Length 604; Indels 0; Gaps

0

189 LARAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF 1 LARAGFYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCPF 46

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Search completed: May 5, Job time: 10.0622 secs 2003, 16:02:00

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Database :
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB seq length: 200000000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Perfect score:
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Gapop 10.0 , Gapext 0.5
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269
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                                                                                                                                                                                                                                                                                                                          Published_Applications_AA:*

1: /cgn2_6/ptodata/2/pubpaa/US08_NEW_PUB.pep:*

2: /cgn2_6/ptodata/2/pubpaa/PCT_NEW_PUB.pep:*

3: /cgn2_6/ptodata/2/pubpaa/US06_NEW_PUB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 LARAGFYYIGPGDRVACFAC.....WEPKDDAMSEHRRHFPNCPF 46
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/cgn2_6/ptodata/2/pubpaa/US09_NEN_PUB.OBB.pep:*
/cgn2_6/ptodata/2/pubpaa/US09_NEN_PUB.pep:*
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/cgn2_6/ptodata/2/pubpaa/US10_NIM_PUB.pep:*
/cgn2_6/ptodata/2/pubpaa/US00_NIM_PUB.pep:*
                                                                                                                                                                                                                                       'cgn2_6/ptodata/2/pubpaa/US06_PUBCOMB.pep:*
'cgn2_6/ptodata/2/pubpaa/US07_NEW_PUB.pep:*
'cgn2_6/ptodata/2/pubpaa/US07_PUBCOMB.pep:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Result
269 269 269 269 269 264 255 255 251 251 241 192 192 192 193 187	Score
100.0 100.0 100.0 100.0 98.1 98.5 94.8 93.3 93.3 93.3 93.3 93.3 93.3 93.3 93	% Query Match
67 438 618 618 612 306 612 306 602 600 600 600 600 600 600 600 600 6	Length
10 9 9 9 10 10 10 10 10 10	B
US-09-201-936-23 US-08-464-588-2 US-09-974-592-8 US-09-974-592-14 US-09-974-592-14 US-09-201-936-62 US-09-201-936-6 US-09-201-936-6 US-09-974-592-12 US-09-974-592-12 US-09-974-592-12 US-09-974-592-12 US-09-974-592-12 US-09-974-592-10 US-09-974-592-10 US-09-974-592-4	SUMMARIES
Sequence 23 Appli Sequence 8, Appli Sequence 8, Appli Sequence 14, Appl Sequence 62, Appli Sequence 62, Appli Sequence 22, Appli Sequence 6, Appli Sequence 6, Appli Sequence 12, Appli Sequence 21, Appli Sequence 20, Appli Sequence 10, Appli Sequence 10, Appli Sequence 10, Appli	Description

RESULT 2 US-08-464-588-2 ; Sequence 2, Application US/08464588

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                  EARLIER APPLICATION NUMBER: 09/011,356
EARLIER FILING DATE: 1998-02-04
EARLIER APPLICATION NUMBER: PCT/IB96/01022
EARLIER FILING DATE: 1996-08-05
EARLIER APPLICATION NUMBER: 08/576,956
                                                                                                                                                                                                                                               APPLICANT: MacKenzie, Alexander E.
APPLICANT: Baird, Stephen
APPLICANT: Liston, Peter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ublication No. US20030073159A1
EARLIER APPLICATION NUMBER: 08/511,485 EARLIER FILING DATE: 1995-08-04
                                                                                                                                                  CURRENT APPLICATION NUMBER: US, CURRENT FILING DATE: 1998-12-01
                                                                                                                                                                                      TITLE OF INVENTION: MAMMALIAN IAP GENE FAMILY, PRIMERS, TITLE OF INVENTION: PROBES, AND DETECTION METHODS: FILE REFERENCE: 07891/003003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                          APPLICANT: Korneluk, Robert G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ENERAL INFORMATION:
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MEDIUM TYPE: 3.5 INC
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TOPOLOGY: LJ
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US/08 FILING DATE: June 5, 1995
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 LARAGFYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCPF 46
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                                                                                                                                                                      APPLICATION NUMBER: US/09/201,936
                                      FILING DATE:
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NG DATE: 11 MAY 1995
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100.0%; Pred. No. 3.5e-26;
tive 0; Mismatches 0;
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SEQ ID NO 8
LENGTH: 618
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Best Local Similarity
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                              CURRENT APPLICATION NUMBER: US/09/974,592
                                                                         APPLICANT: Tsang, Benjamin K
APPLICANT: Pratt, Christine
TITLE OF INVENTION: DETECTION AND MODULATION OF IAPS AND
TITLE OF INVENTION: NAIP FOR THE DIAGNOSIS AND TREATMENT OF PROLIFERATIVE
TITLE OF INVENTION: DISEASE
                                                             FILE REFERENCE: 07891/009004
                                                                                                                                                                                                                                                                        09-974-592-14
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION NUMBER: US 09/617,053
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER: US 08/800,929
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ORGANISM: Homo sapiens
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ORGANISM: Homo sapiens
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APPLICATION NUMBER: US 09/617,053 FILING DATE: 2000-07-14
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                                                                                                                                                                                      MacKenzie, Alexander E
                                                                                                                                                                                                                                                    Application US/09974592
                                                                                                                                                                     Liston,
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Pred. No. 5.1e-26;
Mismatches 0;
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Pred. No. 5.1e-26;
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Best Local (
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TITLE OF INVENTION: MAMMALIAN IAP GENE FAMILY, PHIMERS, TITLE OF INVENTION: PROBES, AND DETECTION METHODS: FILE REFERENCE: 07891/003003

CURRENT APPLICATION NUMBER: US/09/201,936

CURRENT FILING DATE: 1998-12-01

EARLIER APPLICATION NUMBER: 09/011,356

EARLIER APPLICATION NUMBER: PTILING DATE: 1998-02-04

EARLIER APPLICATION NUMBER: PTILING DATE: 1998-03-04

EARLIER FILING DATE: 1998-08-05
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APPLICANT:
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NUMBER OF SEQ ID NOS: 81
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TITLE OF INVENTION: NOVEL NUCLEIC ACID AND AMINO ACID SEQUENCES AND NOVEL
TITLE OF INVENTION: VARIANTS OF ALTERNATIVE SPLICING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: IL 134453 PRIOR EILING DATE: 2000-02-09 PRIOR APPLICATION NUMBER: IL135341
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                                                                                                                                                                                      APPLICANT: Liston, Peter
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tent No. US20020068342A1
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OTHER INFORMATION: Xaa - any amino acid, unknown, or other
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                                                                                                                                                                                                                                             Korneluk, Robert G
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No. US20020187946A1
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Pred. No. 7.9e-25;
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                     TITLE OF INVENTION: MAMMALIAN IAP GENE FAMILY, PR
TITLE OF INVENTION: PROBES, AND DETECTION METHODS
FILE REFERENCE: 07891/003003
                                                                                    APPLICANT:
    CURRENT APPLICATION NUMBER: US/09/201,936
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; ORGANISM: Homo sapiens US-09-201-936-22
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                                                                                                                      US-09-201-936-6
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                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: FastSEQ for Windows Version 3.0 SEQ ID NO 22 LENGTH: 67
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LENGTH: 591
TYPE: PRT
ORGANISM: Mus musculus
                                      GENERAL INFORMATION:
APPLICANT: Korneluk, Robert G.
                                                                           Sequence 6, Application US/09201936 Publication No. US20020187946A1
                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
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Best Local (
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EARLIER APPLICATION NUMBER: 08/576,956
EARLIER FILING DATE: 1995-12-22
EARLIER APPLICATION NUMBER: 08/511,485
EARLIER FILING DATE: 1995-08-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION NUMBER: US/09/201,936
CURRENT FILING DATE: 1998-12-01
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EARLIER FILING DATE: 1995-12-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EARLIER FILING DATE: 1998-02-04
EARLIER APPLICATION NUMBER: PCT/IB96/01022
EARLIER FILING DATE: 1996-08-05
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  APPLICANT:
                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE OF INVENTION: MAMMALIAN IAP GENE FAMILY, PR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: FastSEQ for Windows Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EARLIER APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILE REFERENCE: 07891/003003
                                                                                                                                                                                                                                                                                                                                                                                                TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         176 LARAGEYYIGPGDRVACFACGGKLSNWEPKDYAMSEHRRHFPHCPF 221
                                                                                                                                                                                                21 LARAGETYIGPGDRVACEACGGKLSNWEPKDNAMSEHLRHFPKCPF 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 LARAGEYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCPF 46
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MacKenzie, Alexander
Baird, Stephen
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                                                                                                                                                                                                                                                                              Conservative
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                                                                                                                                                                                                                                                                                                  93.3%;
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                                                                                                                                                                                                                                                                                                Score 251; DB 9;
Pred. No. 8.9e-25;
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Pred. No. 2.9e-24;
                                                                                                                                                                                                                                                                              Mismatches
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; ORGANISM: Homo sapiens
US-09-974-592-6
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US-09-201-936-6
                                                                                Sequence 12, Application US/09974592 Patent No. US20020120121A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQ ID NO 6
LENGTH: 604
                                                                    GENERAL
                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                     Query Match
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                                                                                                                                                                                                                                                                                                                                                                                      SEQ ID NO 6
                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER: US 09/617,053
PRIOR FILING DATE: 2000-07-14
PRIOR APPLICATION NUMBER: US 08/800,929
PRIOR FILING DATE: 1997-02-13
NUMBER OF SEQ ID NOS: 17
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EARLIER FILING DATE: 1995-10-25
EARLIER FILING DATE: 1995-12-22
EARLIER APPLICATION NUMBER: 08/511,485
EARLIER FILING DATE: 1995-08-04
   APPLICANT:
                                 APPLICANT:
                                                 APPLICANT: Korneluk, Robert G
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                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION: DETECTION AND MODULATION OF TITLE OF INVENTION: NAIP FOR THE DIAGNOSIS AND TITLE OF INVENTION: DISEASE FILE REFERENCE: 07891/009004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
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EARLIER FILING DATE: 1998-02-04
EARLIER APPLICATION NUMBER: PCT/IB96/0
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                                                                                                                                                                                                                                                                                                                                                                      ENGTH:
                                                                                                                                                                                 189 LARAGTYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF 234
                                                                                                                                                                                                                                                     Local Similarity
mes 43; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
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                                                                    INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                        604
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Pratt, Christine
MacKenzie, Alexander
Liston, Peter
Baird, Stephen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Baird,
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93.5%;
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Pred. No. 9.5e-24;
1; Mismatches 2;
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Pred. No. 9.5e-24;
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NUMBER OF SEQ ID NOS: 45
SOFTWARE: FASTSEQ for Windows Version 3.0
SEQ ID NO 40
LENGTH: 602
TYPE: PRT
ORGANISM: Mus musculus
US-09-201-936-40
RESULT 13
US-09-201-936-21
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; ORGANISM: Mus musculus
US-09-974-592-12
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Best Local Similarity
Matches 41; Conserv
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Best Local :
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                                                                                                                                                                 Matches
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CURRENT FILING DATE: 1998-12-01
EARLIER APPLICATION NUMBER: 09/011,356
EARLIER FILING DATE: 1998-02-04
EARLIER FILING DATE: 1998-02-04
EARLIER APPLICATION NUMBER: PCT/IB96/01022
EARLIER FILING DATE: 1996-08-05
EARLIER FILING DATE: 1996-08-05
EARLIER FILING DATE: 1995-12-22
EARLIER FILING DATE: 1995-12-22
EARLIER FILING DATE: 1995-12-22
EARLIER FILING DATE: 1995-12-22
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE OF INVENTION: MAMMALIAN IAP GENE FAMILY, PRIMERS, TITLE OF INVENTION: PROBES, AND DETECTION METHODS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Korneluk, Robert G.
APPLICANT: MacKenzie, Alexander E.
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TITLE OF INVENTION: DETECTION AND MODULATION OF IAPS AND
TITLE OF INVENTION: NAID FOR THE DIAGNOSIS AND TREATMENT OF PROLIFERATIVE
TITLE OF INVENTION: DISEASE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILE REFERENCE: 07891/003003
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                                                                               187 LAKAGFYYIGPGDRVACFACDGKLSNWERKDDAMSEHQRHFPSCPF 232
                                                                                                                                                                                  Local
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FILING DATE: 1995-08-04
OF SEQ ID NOS: 45
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Pratt, Christine
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89.1%;
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Pred. No. 1.8e-22;
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Pred. No. 1.7e-22;
3; Mismatches 2;
                                                                                                                                                                                                       Length 602;
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Sequence 21, Application US/09201936 Publication No. US20020187946A1 GENERAL INFORMATION:

APPLICANT: Korneluk, Robert G. APPLICANT: MacKenzie, Alexander E.

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; SOFTWARE: FASTSEQ for Windows Version 3.0
; SEQ ID NO 21
; LENGTH: 68
; TYPE: PRT
; ORGANIZSM: Homo sapiens
US-09-201-936-21
                                                                                                                              RESULT 15
US-09-201-936-4
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US-09-965-967-21
                                                             Sequence 4, Application US/09201936 Publication No. US20020187946A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                          Query Match 71.4%;
Best Local Similarity 73.9%;
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                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Shi, Yigong
TITLE OF INVENTION: Compositions And Methods For Regulating Apoptosis
FILE REFERENCE: PU-0031 (01-1739-1)
CURRENT APPLICATION NUMBER: US/09/965,967
CURRENT FILING DATE: 2001-09-28
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EARLIER FILING DATE: 1998-02-04
EARLIER APPLICATION NUMBER: PCT/IB96/01022
EARLIER FILING DATE: 1996-08-05
EARLIER APPLICATION NUMBER: 08/576,956
EARLIER APPLICATION NUMBER: 08/576,956
EARLIER FILING DATE: 1995-12-22
EARLIER FILING DATE: 1995-12-22
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EARLIER APPLICATION NUMBER: 08/511,485
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CURRENT FILING DATE: 1998-12-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: MAMMALIAN IAP GENE FAMILY, PRIMERS, TITLE OF INVENTION: PROBES, AND DETECTION METHODS FILE REFERENCE: 07891/003003
APPLICANT: Korneluk, Robert G.
APPLICANT: MacKenzie, Alexander E.
APPLICANT: Baird, Stephen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER: 60/:
PRIOR FILING DATE: 2000-09-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Baird, Stephen
APPLICANT: Liston, Peter
                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH: 110
TYPE: PRT
                                                                                                                                                                                                           36 LASAGLYYTGIGDQVQCFCCGGKLKNWEPCDRAWSEHRRHFPNCFF 81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 LARAGFYYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCPF 46
                                                                                                                                                                                                                                                                                                     34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PatentIn
                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   version 3.1
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73.9%;
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    Mismatches

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Search completed: May 5, 2003, 16:11:05 Job time: 5.67051 secs

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В
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TYPE: PRT
ORGANISM: Homo sapiens
US-09-201-936-4
                                                                                                                                                                                                                                                                                                                                                                   CURRENT APPLICATION NUMBER: US/09/201,936
CURRENT FILING DATE: 1998-12-01
EARLIER APPLICATION NUMBER: 09/011,356
EARLIER FILING DATE: 1998-02-04
EARLIER APPLICATION NUMBER: PCT/IB96/01022
EARLIER FILING DATE: 1996-08-05
EARLIER FILING DATE: 1996-08-05
EARLIER APPLICATION NUMBER: 08/576,956
EARLIER APPLICATION NUMBER: 08/576,956
EARLIER APPLICATION NUMBER: 08/511,485
EARLIER FILING DATE: 1995-08-04
                                                                                                 Matches
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Best Local :
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SEQ ID NO 4
                                                                                                                                                                                                                                                                                                                       NUMBER OF SEQ ID NOS: 45 SOFTWARE: FastSEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILE REFERENCE: 07891/003003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION: MAMMALIAN IAP GENE FAMILY, PRIMERS, ITTLE OF INVENTION: PROBES, AND DETECTION METHODS
184 LASAGLYYTGIGDQVQCFCCGGKLKNWEPCDRAWSEHRRHFPNCFF 229
                                                                                                                   y Match 71.4%;
Local Similarity 73.9%;
                                              1 LARAGEYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCPF 46
                                                                                                 34; Conservative
                                                                                                 1; Mismatches
                                                                                                                      Score 192; DB 9;
Pred. No. 2.3e-16;
                                                                                                 11; Indels
                                                                                                                                                  Length 497;
                                                                                                 0
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GenCore version 5.1.4_p5_4578 Copyright (c) 1993 - 2003 Compugen Ltd.
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OM protein protein search, using sw model

мау ç 2003, 15:58:42 ; Search time 5.03456 Seconds (without alignments) 878.365 Million cell updates/sec

Title: Perfect score: US-08-569-749-7 269

Sequence: LARAGEYYIGPGDRVACFAC.....WNPKDDAMSEHRRHFPNCPF 46

Scoring table: BLOSUM62 Gapop 10.0 , Gapext 0.5

Searched: 283224 seqs, 96134422 residues

Total number of hits satisfying chosen parameters: 283224

Minimum Maximum DB seq seq length: 0 length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

pir1:* pir2:* pir3:* pir4:*

Database

PIR_73:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

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pnospnolipase Az (•	apontosis inhibito	probable apoptosis	hupJ protein - Rho	2	apoptosis inhibito	IAP2 orf71 - Bomby	apoptosis inhibito	apoptosis-inhibiti	orf13 protein - Au	IAP1 orf27 - Bomby	Α.	apoptosis inhibito	ORF MSV248 probabl	probable apoptosis	т.	kidney inhibitor o		inhibitor of apopt	BIR repeat contain	Ω		Ω	neuronal apoptosis		apoptosis inhibito		apoptosis inhibito		Description

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T39905 S39834	C64549 G71958 S57108	T10400 D37831	S72438 A48440 E30857	T15390 AD0701 T50696	F48188 E36794
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ALIGNMENTS

C;Accession: S68450

R;Liston, P; Roy, N; Tamai, K.; Lefebvre, C.; Baird, S.; Cherton-Horvat, G.; Faraha Nature 379, 349-353, 1996

A;Title: Suppression of apoptosis in mammalian cells by NAIP and a related family of A;Reference number: A58182; MUID:96149249; PMID:8552191 밁 20 A;Description: apoptotic suppressor C;Superfamily: RING finger homology C;Keywords: apoptosis; zinc finger F;567-611/Domain: RING finger homology <RNG> apoptosis inhibitor hiap-2 - human
C;Species: Homo sapiens (man)
C;Date: 17-Jul-1998 #sequence_revision 17-Jul-1998 #text_change 21-Jul-2000 C; Function: A;Cross-references: EMBL:U45879; NID:g1184317; PIDN:AAC50372.1; PID:g1184318 A; Residues: A; Molecule type: mRNA A; Residues: 1-618 <LIS> A; Accession: S68450 Matches Query Match Status: nucleic acid sequence not shown Local L Similarity 46; Conserv 100.0%; Score 269; DB 2; ilarity 100.0%; Pred. No. 1.8e-25; Conservative 0; Mismatches 0; Length 618; Indels ç Gaps 0;

RESULT 2 JC5964

apoptosis inhibitor - pig
c;Species: Sus scrofa domestica (domestic pig)
C;Date: 04-Sep-1998 #sequence_revision 04-Sep-1998 #text_change 02-Sep-2000
C;Accession: JC5964
R;Stehlik, C.; de Martin, R.; Binder, B.R.; Lipp, J.
Blochem. Biophys. Res. Commun. 243, 827-832, 1998
A;Title: Cytokine induced expression of porcine inhibitor of apoptosis protein (iap)
A;Reference number: JC5964; MUID:98162622; PMID:9501011
A;Accession: JC5964

A;Status: preliminary A;Molecule type: DNA A;Residues: 1-358 <STE>

A;Cross-references: GB:U79142; NID:g2957174; C;Superfamily: RING finger homology F;307-351/Domain: RING finger homology <RRN>

PIDN: AAC39171.1;

PID:g2957175

Query Match

Matches Local Similarity nes 43; Conserv Conservative 95.2%; 2 Score 256; DB 2; Pred. No. 4.4e-24; Mismatches Length 358 Indels 0; Gaps

0;

184 LASAGLYYTGIGDQVQCFCCGGKLKNWEPCDRAWSEHRRHFPNCFF

229

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apoptosis inhibitor IAP homolog - human (Species: Homo sapiens (man) (Species: Homo sapiens (man) (Species: Homo sapiens (man) (Spate: 06-Dec-1996 #sequence_revision 13-Mar-1997 #text_change 17-Nov-2000 (Spate: 06-Dec-1996 #sequence_revision 13-Mar-1997 #text_change 17-Nov-2000 (Spate: 06-Dec-1996 #sequence_revision 13-Mar-1997 #text_change 17-Nov-2000 (Spate: 06-Dec-1996) #sequence_revision (Sequence_revision 13-Mar-1997 #text_change 17-Nov-2000 (Spate: 06-Dec-1996) #sequence_revision 13-Mar-1997 #text_change 17-Nov-200
                                                                                                                                                                                                                                   C;Keywords: apoptosis, F;446-490/Domain: RING
                                                                                                                                                                                                                                                                            A; Description: apoptotic suppressor C; Superfamily: apoptosis inhibitor IAP homolog; C; Keywords: apoptosis; zinc finger
                                     á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Molecule type: mRNA
A;Residues: 1-161,'C',163-422,'Q',424-497 <LIS>
A;Cross-references: EMBL:U45880; NID:g1184319;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Title: Suppression of apoptosis in mammalian cell; by NAIP A;Reference number: A58182; MUID:96149249; PMID:855:191 A;Accession: S68451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Cross-references: EMBL:U32974; NID:g1016687; PIDN:AAC50518.1; PID:g1016688 R;Liston, P.; Roy, N.; Tamai, K.; Lefebvre, C.; Baird, S.; Cherton-Horvat, G.; Nature 379, 349-353, 1996
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A; Residues: 1-604 <LIS>
A; Cross-references: EMB
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A;Title: Suppression of apoptosis in mammalian cells by NAIP and a related family of A;Reference number: A58182; MUID:96149249; PMID:8552191
A;Accession: S68449
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C;Date: 17-Jul-1998 #sequence_revision 17-Jul-1998 #text_change 21-Jul-2000
C;Accession: S68449
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Molecule type: mRNA
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| 553-597/Domain: RING finger homology <RNG>
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43; Conserv
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93.5%;
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73.98;
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Pred. No. 5e-16;
1; Mismatches
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Pred. No. 3e-23;
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Similarity

52.0%;

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apoptosis inhibitor diap - fruit fly (Drosophila melanogaster) C;Species: Drosophila melanogaster C;Species: Drosophila melanogaster C;Date: 17-Jul-1998 #sequence_revision 17-Jul-1998 #text_chang
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S68452
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A:Map position: 5q12.2-9q13
C:Reywords: apoptodsis ATP; glycoprotein; nucleotide binding; P-loo
E:94-110/Domain: transmembrane #status predicted <TMM1>
E:470-477/Region: nucleotide-binding motif A (P-loop)
E:479-496/Domain: transmembrane #status predicted <TMM2>
E:479-496/Domain: transmembrane #status predicted
E:476/Binding site: ATP (Lys) #status predicted
E:476/Binding site: ATP (Lys) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C; Accession: S68452; S785; R; Liston, P.; Roy, N.; Tar
Nature 379, 349-353, 1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          R;ROY, N.; Mahadevan, M.S.; McLean, M.; Shutler, G.; Yaraghi, id, T.O.; de Jong, P.J.; Surh, L.; Ikeda, J.E.; Korneluk, R.G.; Cell 80, 167-178, 1995
A;Title: The gene for neuronal apoptosis inhibitory protein is A;Reference number: A55478; MUID:95112344; PMID:7813013
                                                                                                  C;Keywords: apoptosis; zinc finger F;445-489/Domain: RING finger homology <RNG>
                                                                                                                                                                                                                                                                A;Molecule type: mRNA
A;Residues: 1-36,'AT',37,'K',39,'L',41-44,'H',46-58,'Q',60-412,'A',414-427,'A',429-49
A;Cross-references: EMBL:U45881; NID:g1184313; PIDN:AAC46988.1; PID:g1184314
                                                                                                                                                                                                                                                                                                                                                   submitted to the EMBL Data A; Reference number: S78528 A; Accession: S78528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Title: Suppression of apoptosis in mammalian cells by A;Reference number: A58182; MUID:96149249; PMID:8552191 A;Accession: $68452
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C;Species: Homo sapiens (man)
C;Date: 05-Jan-1996 *sequence_revision 05-Jan-1996 *text_change 02-Feb-2001
                                                                                                                                                                                                                                                                                                                                                                                                                           R;Baird,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Molecule type: mRNA
A; Residues: 1-496 <LIS>
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A; Residues: 1-1232 < ROY>
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                                                                                                                                                   A;Description: apoptotic suppressor
C;Superfamily: apoptosis inhibitor IAP homolog;
                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Cross-references: EMBL:U45881; NID:g1184313; PIDN:AAC46988.1; PID:g1184314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Status: nucleic acid sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Gene: GDB: SMA@; SMA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C; Accession: A55478
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                                                                                                                                                                                                       Function:
                                                                                                                                                                                                                            Cross-references: FlyBase:FBgn0015247
                                                                                                                                                                                                                                                      Genetics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Accession: S68452; S78528
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54.3%;
                                                                                                                                                                                                                                                                                                                                                                                                    Library, January
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Score 140; DB 2; pred. No. 1.4e-09; 16;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Lefebvre, C.; Baird, S.; Cherton-Horvat,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 149; DB 2;
Pred. No. 2.4e-10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   shown
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                                                                                                                                                      finger homology
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RESULT 8
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            apoptosis inhibitor IAP homolog C; Species: Drosophila melanogast C; Date: 06-Dec-1996 #sequence_re
                                                                                                   BIR repeat containing ubiquitin-conjugating enzyme BRUCE - mouse C;Species: Mus musculus (house mouse) C;Date: 22-Oct-1999 #sequence_revision 22-Oct-1999 #text_change C;Accession: T31067
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C;Accession: T42628
R;Yaraghi, Z; Diez, E; Gros, P; MacKenzie, A.
Mamm. Genome 10, 761-763, 1999
A;Title: CDNA cloning and the 5'genomic organization of Naip2,
A;Reference number: Z22179; MUID:99315342; PMID:10384056
A;Accession: T42628
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C;Superfamily: apoptosis inhibitor IAP
F;446-490/Domain: RING finger homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C;Accession: S69545
R;Duckett, C.S.; Nava, V.E.; Gedrich, R.W.;
EMBO J. 15, 2685-2694, 1996
A;Title: A conserved family of cellular gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
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                A; Title: A giant ubiquitin-conjugating enzyme A; Reference number: 220963; MUID:98292517; PMIA; A; Accession: T31067
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A; Residues: 1-1447 < YAR>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     neuronal apoptosis inhibitory protein 2 - mouse C;Species: Mus musculus (house mouse) C;Date: 11-Jan-2000 #sequence_revision 11-Jan-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Molecule type: mRNA
A; Residues: 1-497 < DUC>
                                                                                     R; Hauser, H.P.;
                                                                                                                                                                                                                                                                                                                                                                                             A; Gene:
                                                                                                                                                                                                                                                                                                                                                                                                                            A;Cross-references: EMBL:AF102871; NID:g3860228; PID:g3860229; PIDN:AAC73002.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Cross-references: EMBL:U32373; NID:g1019116;
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Matches
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                                                                    Hauser, H.P.; Bardroff, M.; Pyrowolakis, G.; Cell Biol. 141, 1415-1422, 1998
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                                                                                                                                                                                                                                                                                                                                                                                           Naip2
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preliminary; translated
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51.1%;
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    fruit fly (Drosophila melanogaster)

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Pred. No. 1.4e-09
from GB/EMBL/DDBJ
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                      PMID: 9628897
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                                                                                                                                                                                                                                                                                                                                     DB 2;
                                                                                     Jentsch,
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                                                 apoptosis inhibitors
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kidney
                                 RESULT 12
                                                                                                                                                             Matches
                                                                                       132
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inhibitor

0f

apoptosis

protein

human

1 LARAGEYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCPF 46

as

g

LAEAGFFYTGQGDKTRCFCCDGGLKDWEPDDAPWQQHARWYDRCEY

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apoptosis-inhibiting protein - Orgyia pseudotsugata multicapsid nuclear C;Species: Orgyia pseudotsugata multicapsid nuclear polyhedrosis virus, C;Datc: 15-Oct-1994 *sequence_revision 15-Oct-1994 *text_change 15-Sep-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Virology 229, 381-399, 1997

A;Title: The sequence of the Orgyla pseudotsugata A;Reference number: Z17011; MUID:97271300; PMID:91 A;Accession: T10304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     inhibitor of apoptosis protein 3 - Orgyia pseudotsugata nuclear polyhedrosis virus
C;Species: Orgyia pseudotsugata nuclear polyhedrosis virus, OpMNPV
C;Date: 16-Jul-1999 #sequence_revision 16-Jul-1999 #text_change 15-Sep-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Cross-references: EMBL:Y17267; NID:g3319989; A;Note: localized to the Golgi compartment and C;Keywords: membrane-associated protein
                                                                                           A;Cross-references: GB:L22564; NID:g456111; PIDN:AAB02610.1; PID:g456114 A;Note: authors translated the codon TGG for residue 28 as Tyr, GAC for C;Superfamily: viral apoptosis inhibitor IAP; RING finger homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Cross-references: FC;Superfamily: viral F;217-261/Domain: RIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Molecule type: mRNA
A; Residues: 1-4845 <HAU>
                                                                                                                                                A; Molecule type: DNA
A; Residues: 1-268 <BIR>
                                                                                                                                                                                                        A; Accession: A53989
                                                                                                                                                                                                                           A; Title: An apoptosis-inhibiting gene from A; Reference number: A53989; MUID:94187094;
                                                                                                                                                                                                                                                                                     R; Birnbaum,
                                                                                                                                                                                                                                                                                                     C; Accession: A53989
                                                                                                                                                                                                                                                                                                                                                                                    A53989
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A; Residues: 1-268 < AHR>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C; Accession: T10304
                                                                                                                                                                                        A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 11
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                                                                                                                                                                                                                                                                 Virol.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             132 LAEAGFFYTGQGDKTRCFCCDGGLKDWEPDDAPWQQHARWYDRCEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          284 MAQAGFYHQPASSGDDRAMCFTCSVCLVCWEPTDEPWSEHERHSPNCPF
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                                                                                                                                                                                                                                                                   68,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       preliminary;
                                                                                                                                                                                                                                                             M.J.; Crem, 8, 2521-2528,
                 Similarity
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                                                                           RING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL: U75930;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 apoptosis
                                                                           finger homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              finger homology <RRN>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    R.R.; Funk, C.J.; Evans, J.; Harwood,
                                                                                                                                                                                                                                                                     1994
               49.18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    49.18;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ); NID:g2934903; PIDN:AAC59034.1; PID:g1911281
inhibitor IAP; RING finger homology
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Pred. No. 7.3e
4; Mismatches
Score 132; DI
Pred. No. 7.66
6; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 132; DB 2;
Pred. No. 7.6e-09;
6; Mismatches 19
                                                                             <RRN>
                                                                                                                                                                                                                             a nuclear polyhedrosis
PMID:8139034
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7.3e-08;
າຣ
                   DB 2;
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                                       Length 268;
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probable apoptosis inhibitor - Chilo iridescent virus
C;Species: Chilo iridescent virus
C;Date: 24-Mar-1999 #sequence_revision 24-Mar-1999 #text_change 02-Sep-2000
                                                                                            A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 1-208 <BAH>
                                                                                                                                                   A; Title: The DNA sequence of Chilo iridescent virus between A; Reference number: Z14834; MUID:98141693; PMID:9482589 A; Accession: T03183
                                                                                                                                                                                                                               C;Accession: T03183
R;Bahr, U.; Tidona,
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A;Gene: kiap
                                                                                                                                                                                                           R;Bahr, U.; Tidona, C.A.; Darai, G. Virus Genes 15, 235-245, 1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     R;Crook, N.E.; Clem, R.J.; Miller, L.K.
J. Virol. 67, 2168-2174, 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Map position: 20q13.3
C; Keywords: apoptosis
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A; Title: KIAP, a novel member of
                                                                                                                                                                                                                                                                                                                                  T03183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Title: An apoptosis-inhibiting baculovirus gene with a zinc finger-like motif.
A;Reference number: A45679; MUID:93188168; PMID:8445726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A45679
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Reference number: JC7568; MUID:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          R; Lin, J.H.; Deng,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C; Accession:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Status: preliminary
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              inhibitor-of-apoptosis polypeptide (IAP) – Cydia pomonella granulosis virus
C:Species: Cydia pomonella granulosis virus CpGV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Molecule type: mRNA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ;Cross-references: GB:L05494; NID:g289583; PIDN:AAA43835.1; PID:g289584; Note: sequence extracted from NCBI backbone (NCBIN:127014, NCBIP:127015); Superfamily: viral apoptosis inhibitor IAP; RING finger homology'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ;Species: Homo sap
:Date: 30-Jun-2001
                                  Molecule type: DNA
Residues: 1-275 <CRO>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Accession:
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  Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 108 LAAAGFFHTGHQDKVRCFFCYGGLQSWKRGDDPWTEHAKWFPSCQF 153
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                                                                                          1-208 <BAH>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            #sequence_revision 30-Jun-2001 #text_change 30-Jun-2001
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47.8%;
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45.78;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               279, 820-831, 2000
of the inhibitor of apoptosis protein family.
[D: 21092523; PMID:11162435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
  Score 117;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 124;
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Pred. No. 3.
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2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 275;
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Length 208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
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                                                                          PID: g2738454
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37 LCEAGFFYTNIGDITVCFNCGLKIKNWLYYNDPWIEHSKWSPNCNY 82

Job time

Search completed: May 5,

2003, 16:08:09

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RESULT 15
T28409
ORF MSV248
                                                                                                                                                                                                                                                                                                                                 ORF MSV248 probable inhibitor of apoptosis protein (IAP) - Melanoplus sanguinipes C;Species: Melanoplus sanguinipes entomopoxvIrus C;Date: 21-Jan-2000 #sequence_revision 21-Jan-2000 #text_change 21-Jul-2000 C;Accession: T28409
Ş
                                                                                                                                                                                  A; Molecule type: DNA
A; Residues: 1-150 < AFO>
                                                                                                                                                                                                                                                          R;Afonso, C.L.; Tulman, E.R.; Lu, Z.; Oma, E.; Kutish, G.F.; J. Virol. 73, 533-552, 1999
A;Title: The genome of Melanoplus sanguinipes entomopoxvirus. A;Reference number: Z20484; MUID:99102612; PMID:9847359.
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                                                                                                                        A; Note:
                                                                                                                                                                                                                   A; Status: preliminary; translated
                                                                                                                                                                                                                                          A; Reference number: A; Accession: T28409
                                                                                                                                                           A; Cross-references:
                                                          Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity Matches 22; Conserv
                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     58
  1 LARAGEYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCPF 46
                                                                                                                      MSV248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LARAGFYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFP----NCPF 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LSRAGFIYLNIGDQVQCFYCDLKLKEWKRSDNPFEEHKKHTQDLKINCLF 107
                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                           EMBL: AF063866; NID: g4049647; PIDN: AAC97724.1 PID: g4049764
                                                          41.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  44.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pred.
                                                          Score 111; DB 2; Pred. No. 1.8e-06;
                                                                                                                                                                                                                     from GB/EMBL/DDBJ
                                         Mismatches
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ches 17;
                                                                            Length 150;
                                         Indels
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                                         Gaps
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                                         0;
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OM protein - protein search, using sw model
                                                                                    GenCore version 5.1 4_p5_4578 Copyright (c) 1993 - 2003 Compugen Ltd.
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Run on: May 5, 2003, 15:51:32 ; Search time 1.90783 Seconds (without alignments) 1000.040 Million cell updates/sec

Title:
Perfect score:
Sequence: US-08-569-749-7
269
1 LARAGEYYIGPGDRVACFAC.....WEPKDDAMSEHRRHFPNCPF 46

Scoring table:

BLOSUM62 Gapop 10.0 , Gapext 0.5

Searched: 112892 seqs, 41476328 residues

Total number of hits satisfying chosen parameters:

112892

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

SwissProt_40:*

Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.		Query Match	Length	DB	ID	Description
ב	269	100.0	618	- :	BIR3_HUMAN	Q13490 homo sapien
2	264	8.	612	-	BIR3_MOUSE	0 mus mu
w	256	ū	358	H	PIAP_PIG	0 sus
4	248		604	Н	BIR2_HUMAN	9 homo
نان	241	9.	600	μ	BIR2_MOUSE	3 mus m
თ	192		497	Ъ	BIR4_HUMAN	homo s
7	191	۲	611	ш	BIR_CHICK	0 gallı
8	187	9.	496	_	BIR4_MOUSE	9 mus mu
o	185	8	496	ר	BIR4_RAT	ratt
10	155	7.	236	Ъ	BIR8_HUMAN	9 homo sa
11	155	7	236	Н	BIR8_PANTR	pan t
12	154	57.2	236	, ш	BIR8_GORGO	gori
1 1 3	149	ں د	1403	4 بـ	BIRI_HUMAN	homo
15 4	141	52.4	1402	٠,	BIRA MODSE	Ogawks mus musculu
16	141	2٠	1403	\vdash	BIRE_MOUSE	Bum
17	141	52.4	1403	_	BIRF_MOUSE	6 mus
18	140	2	498	٢	IAP2_DROME	dros
19	w	۲	1447	ш	BIRB_MOUSE	4 mus n
20	133.5	49.6	4829	_	BIR6_HUMAN	9 homo
21	132	9	268	۲	IAP3_NPVOP	orgyi
22	129	8	438	٢	IAP1_DROME	6 drosoph
23	127	47.2	298	-	BIR7_HUMAN	5
24	124		275	۳	IAP_GVCP	6 cydia
25	117		239	۲	ZFP_IRV6	2 chilo
26	108.5		140	٢	BIR5_MOUSE	070201 mus musculu
27	108.5	40.3	142	ب	BIR5_RAT	Q9jhy7 rattus norv
28	0		997	μ	BIR1_SCHPO	schiz
29		38.1	142	_	BIR5_HUMAN	
30	96	•	286	ш	IAP1_NPVAC	5 autog
31	93	34.6	275	Н	IAP1_NPVOP	σ
32	æ		249	ب	IAP2_NPVAC	4 autogra
33	78.5	29.2	224	ب	IAPL_ASFB7	Q65138 african swi

45	44	43	42	41	40	39	3 8	37	36	35	34
54.5	55	56	56.5	57	58.5	58.5	63.5	72.5	72.5	72.5	73.5
20.3	20.4	20.8	21.0	21.2	21.7	21.7	23.6	27.0	27.0	27.0	27.3
424	370	2111	181	122	404	284	278	238	224	224	224
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EXON_NPVOP	DPSD_CRIGR	YPB4_CAEEL	VG79_HSVI1	PA21_BOTAS	FPRA_METTM	CELA_ACEXY	HUPJ_RHOCA	IAPL_ASFM2	IAPL_ASFCH	IAPL_ASFC3	IAPL_ASFM1
P24081	P27465										
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ALIGNMENTS

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88888	RRRRR	R R R R R	RR RR RR RR RR RR RR RR RR RR RR RR RR	RT RT	2	AFFFFFFFF R 20000	RESULT BIR3_H ID B
repeat. : Nat. Struct. Biol. 6:648-651(1999). Nat. Struct. Biol. 6:648-651(1999)I- FUNCTION: APOPTOTIC SUPPRESSOR. THE BIR MOTIFS REGION INTERACTS WITH THE RECEPTOR ASSOCIATED FACTORS 1 AND 2 (TRAF1 AND TRAF2) TO FORM AN HETEROMERIC COMPLEX, WHICH IS THEN RECRUITED TO THE TUMOR NECROSIS FACTOR RECEPTOR 2 (THER2).	STRUCTURE BY NMR OF 266-363. MEDLINE-99332054; PubMed-10404221; Hinds M.G., Norton R.S., Yaux D.L., Day C.L.; "Solution structure of a baculoviral inhibitor of apoptosis (IAP)	SEQUENCE FROM N.A. TISSUB-Uterus; Strausberg R.; Submitted (OCT-2001) to the EMBL/GenBank/DDBJ databases.	SEQUENCE FROM N.A. SEQUENCE FROM N.A. TISSUE-Fetal liver; TISSUE-Fetal liver; Uren A.G., Pakusch M., Hawkins C.J., Puls K.L., Vaux D.L.; Uren A.G., Pakusch M., Hawkins C.J., Puls K.L., Vaux D.L.; "Cloning and expression of apoptosis inhibitory protein homologs that function to inhibit apoptosis and/or bind tumor necrosis factor receptor-associated factors."; Proc. Natl. Acad. Sci. U.S.A. 93:4974-4978(1996).	SEQUENCE FROM N.A. SEQUENCE FROM N.A. TISSUB-Liver; MEDLINE-96149249; PubMed-8552191; Liston P., Roy N., Tammai K., Lefebvre C., Baird S., Cherton-Horvat G., Farahani R., McLean M., Ikeda J., Mackenzie A., Korneluk R.G.; "Suppression of apoptosis in mammalian cells by NAIP and a related family of TAP genes."; family of TAP genes."; Nature 379:349-353(1996).	SEQUENCE FROM N.A. SEQUENCE FROM N.A. MEDLINE-96128127; PubMed-8548810; MCTHE M., Pan MG., Henzel W.J., Ayres T.M., Goeddel D.V.; The TMFR2-TRAF signaling complex contains two novel proteins related to baculoviral inhibitor of apoptosis proteins."; Cell 83:1243-1252(1995).	013490; Q16516; 01-NOV-1997 (Rel. 35, Created) 01-NOV-1997 (Rel. 35, Last sequence u 15-JUN-2002 (Rel. 41, Last annotation Baculoviral IAP repeat-containing proprotein 2) (HIAP2) (HIAP-2) (C-IAP1) protein 2) (IAP homolog B). BIRC3 OR API2 OR IAP2 OR MIHB. Homo sapiens (Human). Eukaryota; Metazoa; Chordata; Cranlat Mammalia; Eutheria; Primates; Catarrh MCBI_TaxID=9606;	LT 1 _HUMAN BIR3 HUMAN STANDARD; PRT; 618 AA.

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InterPro; IPR001315; CARD.
InterPro; IPR001841; Znf_ring.
InterPro; IPR001841; Znf_ring.
Pfam; PF00097; zf-33HC4; 1.
Pfam; PF00619; CARD; 1.
Pfam; PF00619; CARD; 1.
Pfam; PF00653; BIR; 3.
SMART; SM00238; BIR; 3.
SMART; SM00184; RING; 1.
SMART; SM00184; RING; 1.
01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Baculoviral IAP repeat-containing protein 3 (protein 2) (MIAP-2).
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CONFLICT
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CONFLICT
                                                     Q62210; Q08864;
Q1-NOV-1997 (Re
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                                                                                 BIR3_MOUSE
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                                                                                                                                                              1 LARAGFYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCPF
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SIMILARITY: CONTAINS 3 BIR REPEATS.
SIMILARITY: CONTAINS 1 CARD DOMAIN.
SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
DATABASE: NAME-Atlas Genet. Cytogenet. Chool. Haematol.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SUBUNIT: Interacts with SMAC and with PRSS25; these interact inhibit apoptotic suppressor activity.
SUBCELLULAR LOCATION: Cytoplasmic (Potential).
TISSUE SPECIFICITY: PRESENT IN MANY FETAL AND ADULT TISSUES.
MAINLY EXPRESSED IN ADULT SKELETAL MUSCIE, THYMUS, TESTIS, C
AND PANCREAS, LOW OR ABSENT IN BRAIN AND PERIPHERAL BLOOD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WWW-"http://www.infobiogen.fr/services/chromcancer/Genes/BIRC3ID239.html"
                                                                                                                                                LARAGFYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCPF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    L49431; AAC41942.1; -. U45879; AAC50372.1; -. U37547; AAC50508.1; -. BC016174; AAH16174.1; -.
                                                                                                                                                                                                      46;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HGNC:590; BIRC2.
                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                  PS01282; BIR_REPEAT_1;
PS50143; BIR_REPEAT_2;
PS50209; CARD; 1.
PS00518; ZF_RING_1; FAI
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Q -> L (IN
L -> W (IN
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BIR 2.
BIR 3.
CARD.
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Pred. No. 2.5e-27;
Mismatches 0;
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5 -> G (IN REF. 2).
7 -> L (IN REF. 2).
6 -> W (IN REF. 2).
C1778D328063586D (
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            (Inhibitor of apoptosis
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                                                                                                                                                                                                                              Length 618;
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InterPro; IPR001370; BIR.
InterPro; IPR001315; CARD.
InterPro; IPR001315; CARD.
InterPro; IPR001315; CARD;
InterPro; IPR001315; CARD;
InterPro; IPR00197; zf-C3HC4; 1.
Pfam; PF00059; CARD; 1.
Pfam; PF000519; CARD; 1.
Pfam; PF000538; BIR; 3.
SMART; SM00114; CARD; 1.
SMART; SM00114; CARD; 1.
SMART; SM00184; RING; 1.
SMART; SM00184; BIR, REPEAT_1; 3
PROSITE; PS01282; BIR, REPEAT_2; 3
PROSITE; PS01283; BIR, REPEAT_2; 3
PROSITE; PS01289; CARD; 1.
PROSITE; PS01289; ZF_RING_1; FALS; PROSITE; PS01289; ZF_RING_2; 1.
                                   ZN_FING
CONFLICT
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REPEAT
           SEQUENCE
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DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL; L49433; AAC42078.1;
EMBL; U88909; AAC53532.1;
HSSP; Q13490; 1QBH.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NECROSIS FACTOR RECEPTOR 2 (TNFR2).

SUBUNIT: Interacts with SMAC and with PRSS25; these is inhibit apoptotic suppressor activity (By similarity).

SUBCELULIAR LOCATION: Cytoplasmic (Potential).

TISSUE SPECIFICITY: EXPRESSED IN HEART, BRAIN, SPLEEN, LIVER, SKELETAL MUSCLE, KIDNEY, AND TESTIS.

SIMILARITY: BELONGS TO THE IAP FAMILY.

SIMILARITY: CONTAINS 3 BIR REPEATS.

SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
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Liston P., Lefebvre C., Fong W.G., Xuan J.Y., Korneluk R.
"Genomic characterization of the mouse inhibitor of apopt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rothe M., Pan M.-G., Henzel W.J., Ayres T.M., Goeddel "The TNFR2-TRAF signaling complex contains two novel to baculoviral inhibitor of apoptosis proteins.";
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 and 2 genes.";
Genomics 46:495-503(1997)
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Query Match Best Local :

Local

45; Conserv

Conservative

98.1%; 97.8%;

Score 264; DB 1; Pred. No. 1.1e-26;

Length 612;

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Gaps

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                                                      Query Match
Best Local
                                            Matches
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Cytokine induced expression of porcine inhibitor of protein (lap) family member is regulated by NF-kappa Biochem. Biophys. Res. Commun. 243:827-832(1998).

I. SIMILARITY: BELONGS TO THE IAP FAMILY.

I. SIMILARITY: CONTAINS 2 DIR REPEATS.

I. SIMILARITY: CONTAINS 1 CARD DOMAIN.

I. SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
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15-DEC-1998
16-OCT-2001
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                                                                                                                                                                          PROSITE; PS01282; BIR_REPEAT_1; PROSITE; PS50143; BIR_REPEAT_2; PROSITE; PS50209; CARD; 1.
                                                                                                                                                                                                                                                                                                                                               entities requires a license agreement or send an email to license@isb-sib.cl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE-98162622; PubMed-9501011; Stehlik C., de Martin R., Binder
                                                                                        SEQUENCE
                                                                                                                                                      PROSITE; PS00518; ZF_RING_1; FALSE_NEG PROSITE; PS50089; ZF_RING_2; 1.
                                                                                                                                                                                                                                                                               InterPro;
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Mammalia; Eutheria;
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erPro; IPR001315; CARD.
srPro; IPR001841; Znf.ring.
n; PF00097; zf-C3HC4; 1.
n; PF00659; CARD; 1.
n; PF00653; BIR; 2.
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                                                                                                                                                                                                                                                                                                             U79142; AAC39171.1;
Q13490; 1QBH.
                                                                                                                                                                                                          ; SM00238; BIR; 2.
; SM00114; CARD; 1.
; SM00184; RING; 1.
                                            l Similarity
43; Conserv
                                                                                                                                                                                                                                                                                                                                               email to license@isb-sib.ch).
                                                                                     4
90
193
311
358
                                                                                                                                           Zinc-finger; Repeat.
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                                                                                        40977
                                                     95.2%;
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                                                                                                BIR 1.
BIR 2.
CARD.
RING-TYPE.
                                          Pred. No. 6.90
2; Mismatches
                                                               Score
                                                                                     EB2268FA9A6190A4 CRC64;
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                                                     No. 6.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      update)
                                      DB 1,
6.9e-26;
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B.";
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RESULT 4
BIR2_HUMAN

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Baens M., Steyls A., Dierlamm J., De Wolf-Peeters C., Marynen P.;
"Structure of the MIT gene and molecular characterization of the
genomic breakpoint junctions in the t(11;18)(q21;q21) of marginal zc
B-cell lymphomas of MALT type.";
Genes Chromosomes Cancer 29:281-291(2000)
Genes Chromosomes Cancer 29:281-291(2000)
WITH THE RECEPTOR ASSOCIATED FACTORS 1 AND 2 (TRAF1 AND TRAF2) 1
FORM AN HETEROMERIC COMPLEX, MHICH IS THEN RECRUITED TO THE TUM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDIJNE-96209843; PubMed-8643514; WIRLINE-96209843; PubMed-8643514; Viren A.G., Pakusch M., Hawkins C.J., Puls K.L., Viren A.G., Pakusch M., Hawkins C.J., Puls K.L., Viren A.G., Pakusch M., Hawkins C.J., Puls K.L., Viren A.G., Pakusch M., Hawkins C.J., Puls K.L., Viren A.G., Pakusch M., Pakusc
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.

MEDILINE-96128127; PubMed-8548810;

Rothe M., Pan M.-G., Henzel W.J., Ayres T.M., Goeddel D.V.;

Rothe M., Pan M.-G., Henzel W.J., Ayres T.M., Goeddel D.V.;

"The INFR2-TRAF signaling complex contains two novel proteins related to baculoviral inhibitor of apoptosis proteins.";

Cell 83:1243-1252(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BIR2_HUMAN STANDARD; PRT; 604 AA. Q1348; Q1628; Q9UP46; Q9HC27; Q1-NOV-1997 (Rel. 35, Created) Q1-NOV-1997 (Rel. 35, Last sequence update) 15-JUN-2002 (Rel. 41, Last annotation update) Baculoviral IAP repeat-containing protein 1 (HIAP1) (HIAP-1) (C-IAP2) (TNFR2-T) protein 1) (HAP homolog C).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mammalia; Eutheria; NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BIRC2 OR API1 OR IAP1 OR MIHC. Homo sapiens (Human).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Horrevoets A.J., Fontijn R.D.,
ten Cate J.W., Pannekoek H.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TISSUE-Fetal liver;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      genes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "Vascular endothelial genes that are responsive to tume factor-alpha in vitro are expressed in atherosclerotic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE-20519161;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EQUENCE FROM N.A.
                                                                                                      NECROSIS FACTOR RECEPTOR 2 (TNFR2).

SUBUNIT: Interacts with SMAC and with PRSS25; these interactions inhibit apoptotic suppressor activity.

inhibit apoptotic suppressor activity.

SUBCELLULAR LOCATION: Cytoplasmic (Potential).

TISSUE SPECIFICITY: HIGHLY EXPRESSED IN FETAL LUNG, AND KIDNEY. 1

THE ADULT, EXPRESSION IS MAINLY SEEN IN LYMPHOID TISSUES,

THE ADULT, EXPRESSION IS MAINLY SEEN IN LYMPHOID TISSUES,

INCLUDING SPLEEN, THYMUS AND PERIPHERAL BLOOD LYMPHOCYTES.

DISEASE: INVOLVED in a t(11:18)(q21:q21) Chromosomal translocation recurrent in low-grade MALT lymphoma (Mucosa-associated lymphoid tissue). This translocation is found in approximately 50% of
     SIMILARITY:
                                                         MALT1 and BIRC2
                                                                                  cytogenetically abnormal low-grade MALT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          93:3418-3431(1999)
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BELONGS TO THE CONTAINS 3 BIR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PubMed=11066071;
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  IAP FAMILY. REPEATS.
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                                                                                  lymphoma
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c necrosis fa
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pfam; PF00653; BIR; 3.

SMART; SM00238; BIR; 3.

SMART; SM00114; CARD; 1.

SMART; SM00114; CARD; 1.

SMART; SM00184; RING; 1.

SMART; SM00184; RING; 1.

SMART; SM00184; BIR_REPEAT_1; 3.

PROSITE; PS01282; BIR_REPEAT_2; 3.

PROSITE; PS50189; ZF_RING_1; FALSE_N

PROSITE; PS50089; ZF_RING_2; 1.
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EMBL; U45878; AAC50371.1; --
EMBL; U37546; AAC50507.1; --
EMBL; AF070674; AAC83232.1; --
EMBL; AF178945; AAG09369.1; --
HSSP; Q13490; 1QBH.
                              01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation updat)
Baculoviral IAP repeat-containing protein 2
protein 1) (MIAP1) (MIAP-1).
BIRC2 OR APII OR IAP1
Mus musculus (Mouse).
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between
  Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                             008863;
                                                                                                                                                                                                                BIR2_MOUSE
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REPEAT
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601712; -.
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                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
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IPR001315; CARD.
IPR001841; Znf_ring.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        604 AA;
                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                STANDARD;
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AAG09369.1; -.
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322
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91.3%;
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1 RING-TYPE ZINC FINGER.
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BIR 2.
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N -> Y (IN R
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Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
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No. 1.3e-24;
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                                                                                                                                                                                                            B
                                                                                                       2 (Inhibitor of apoptosis
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                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 604;
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BIR4_
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                                                                                                                                                                                                                                                                                                                     RESULT
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Best Local S
Matches 41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro; IPRO01370; BIR.
InterPro; IPRO01315; CARD.
InterPro; IPRO01841; Znf_ring.
InterPro; IPRO01841; Znf_ring.
InterPro; IPRO01841; Znf_ring.
InterPro; IPRO01841; Znf_ring.
InterPro; IPRO0184; INTERPRO; INTERPRO*
SMART; SM00238; BIR; 3.
SMART; SM00114; CARD; 1.
SMART; SM00184; RING; 1.
BIR4_HUMAN STANDARD; PRT; 497 AA.

P98170; Q9NQ14;

01-OCT-1996 (Rel. 34, Created)

15-JUN-2002 (Rel. 34, Last sequence update)

15-JUN-2002 (Rel. 41, Last annotation update)

Baculoviral IAP repeat-containing protein 4 (Inhibitor of apoptosis protein 3) (X-linked inhibitor of apoptosis protein 3) (X-linked inhibitor of apoptosis protein) (HILP).
                                                                                                                                                                                                                                                                                                                    DOMAIN
ZN_FING
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              the European Bioinformatics Institute. The use by non-profit institutions as long modified and this statement is not removed.
                                                                                                                                HUMAN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                   REPEAT
REPEAT
                                                                                                                                                                                                                                                                                                                                                                                               Apoptosis;
REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                               PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; U88908;
HSSP; Q13490;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Liston P., Lefebvre C., Fong W.G., Xuan J.Y., Korneluk R.G.; "Genomic characterization of the mouse inhibitor of apoptosis protein 1 and 2 genes.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ÷
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE-Skeletal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=10090;
                                                                                                                                                                                           187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MGD; MGI:1197007
                                                                                                                                                                                                                         "1 LARAGFYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCPF 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FUNCTION: APOPTOTIC SUPPRESSOR. THE BIR MOTIFS REGION INTERACTS
WITH THE RECEPTOR ASSOCIATED FACTORS 1 AND 2 (TRAF1 AND TRAF2) TO
FORM AN HETEROMERIC COMPLEX, WHICH IS THEN RECRUITED TO THE TUMOI
NECROSIS FACTOR RECEPTOR 2 (THFR2) (BY SIMILARITY).
SUBGUNIT: Interacts with SMAC and with PRSS25; these interactions
inhibit apoptotic suppressor activity (By similarity).
SUBCELLULAR LOCATION: Cytoplasmic (Potential).
SIMILARITY: BELONGS TO THE IAP FAMILY.
SIMILARITY: CONTAINS 3 BIR REPEATS.
SIMILARITY: CONTAINS 1 CARD DOMAIN.
SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
                                                                                                                                                                                           LAKAGFYYIGPGDRVACFACDGKLSNWERKDDAMSEHQRHFPSCPF
                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                PS00518; ZF_RING_1; PS50089; ZF_RING_2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                PS50209;
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                                                                                                                                                                                                                                                                                                                  27
167
253
436
553
600
                                                                                                                                                                                                                                                                                                                                                                                                                 Zinc-finger;
                                                                                                                                                                                                                                                        Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                CARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Birc2.
                                                                                                                                                                                                                                                                                                                    233 B
320 B
525 C
588 R
67198 MW;
                                                                                                                                                                                                                                                                     89.6%;
89.1%;
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                                                                                                                                                                                                                                                       ω,
                                                                                                                                                                                                                                                                                                                                 BIR 1.
BIR 2.
BIR 3.
CARD.
RING-TYPE.
                                                                                                                                                                                                                                                                     Score 241; DB 1; Length 600; Pred. No. 1e-23;
                                                                                                                                                                                                                                                                                                                                                                                                                                               FALSE_NEG
                                                                                                                                                                                                                                                                                                                       AD7F73E6849317D1 CRC64;
                                                                                                                                                                                                                                                       Mismatches
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MIM; 300079; Genew; EMBL; U32974; A EMBL; AL121601;

AAC50518

CAB95312.

PDB; 1G3F; 10-JAN-01

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TISSUB-Fetal heart;
MEDLINE-96256286; PubMed-8654366;
Duckett C.S., Nava V.E., Gedrich R.W., Clam R.J., v Gilfillan M.C., Shiels H., Hardwick J.M., Thompson A conserved family of cellular genes related to the gene and encoding apoptosis inhibitors.";
EMBO J. 15:2685-2694(1996).
                                    This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the Ew the European Bioinformatics Institute. There are no restruse by non-profit institutions as long as its content modified and this statement is not removed. Usaye by and entitles requires a license agreement (See http://www.isb-sor send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRUCTURE BY NMR OF 241-356 IN COMPLEX WITH SMAMEDLINE=21020961; PubMed=11140637;
Liu Z., Sun C., Olejniczak E.T., Meadows R.P.,
Herrmann J., Wu J.C., Fesik S.W.;
"Structural basis for binding of Smac/DIABLO to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Deveraux Q.L., Takahashi R., Salvesen G. "X-linked IAP is a direct inhibitor of c Nature 388:300-304(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Liston P., Roy N., Tamai K., Lefebvre C., Baird Farahani R., McLean M., Ikeda J., Mackenzie A., "Suppression of apoptosis in mammalian cells by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Verhagen A.M., Silke J., Ekert P.G., Pakusch M., Kaufmann Connolly L.M., Day C.L., Tikoo A., Burke R., Wrobel C., M. Simpson R.J., Vaux D.L.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "Suppression of apoptosis in family of IAP genes.";
Nature 379:349-353(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TISSUE-Fetal brain;
MEDLINE-96149249; PubMed-8552191;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Primates; NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Nature 408:1004-1008(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "HtrA2 promotes cell death through its its ability to antagonize inhibitor of Biol. Chem. 277:445-454(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Submitted
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           domain."
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MUTAGENESIS OF ASP-148; ASP-214;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE-97373959;
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                                                                                                                                                                                                                                                                                                                                                             SUBUNIT: Interacts with SMAC and with PRSS25; inhibit apoptotic suppressor activity. SUBCELLULAR LOCATION: Cytoplasmic. TISSUE SPECIFICITY: UBIQUITOUS, EXCEPT PERIPHE LEUKOCYTES.
                                                                                                                                                                                                         The interactions with SMAC and PRSS25 and third BIR domains.
SIMILARITY: BELONGS TO THE IAP FAMILY.
SIMILARITY: CONTAINS 3 BIR REPEATS.
SIMILARITY: CONTAINS 1 RING-TYPE ZINC
                                                                                                                                                                                                                                                                                                      DOMAIN: The second BIR domain is sufficient to inhibit caspase-3 and -7, while the third BIR is involved in caspase-9 inhibition. The interactions with SMAC and PRSS25 are mediated by the second
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AAC50373.1;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ASN-259;
                                                                                                                                                                                                                                                                                                                                                                                          EXCEPT PERIPHERAL
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                                                          http://www.isb-sib.ch/announce/
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honpson C.B.;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                       caspase-3, -7 and -9. these interactions
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h proteases.";
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                                                                                                                     no restrictions
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MBL outstation -
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RESULT 7
BIR_CHICK
QΥ
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01-NOV-1997 ()
01-NOV-1997 ()
16-OCT-2001 ()
Inhibitor of
                                                                                                                                                                                                                                                                                                                                                                          CONFLICT
CONFLICT
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                        ZN_FING
MUTAGEN
MUTAGEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PROSITE;
PROSITE;
PROSITE;
                                                                                                            TISSUE-Spleen;
MEDLINE-97101112; PubMed-8945639;
Digby M.R., Kimpton W.G., York J.J.,
"ITA, a vertebrate homologue of IAP;
lymphocytes.";
                     ++
                                                                                             - I -
                                                                                                                                                                                            Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                        REPEAT
REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pfam; PF00097; zf-C3HC4;
Pfam; PF00653; BIR; 3.
SMART; SM00238; BIR; 3.
SMART; SM00184; RING; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    InterPro; IPR001370; BIR.
InterPro: IPR001841; Znf_ring.
between
                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                   Gallus gallus
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Apoptosis; Z:
3D-structure
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PROSITE;
                                                                                                                                                                     NCBI_TaxID=9031;
                                                                                                                                                                                                                                                                                                                                                                                                                                  REPEAT
                                                                                                                                                                                                                                                                                                          184 LASAGLYYTGIGDQVQCFCCGGKLKNWEPCDRAWSEHRRHFPNCFF
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                                                                                                                                                                                                                                                                                                                   1 LARAGFYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCPF
SWISS-PROT entry
een the Swiss In
                                                                                                                                                                                                                                                                                                                                                  Similarity
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PS50143; BIR_REPEAT_2;
PS00518; ZF_RING_1; FAI
PS50089; ZF_RING_2; 1.
                                                                                                                                                                                                                                                                                                                                                                        162
423
497
                                                                                                                                                                                           Metazoa;
                                                                                                                                                                                                                                    7 (Rel. 35,
7 (Rel. 35,
1 (Rel. 40,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Zinc-finger;
                                                                                                                                                                                                                                                                                                                                                                                                        163
265
450
214
314
                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                            apoptosis
                                                                                                                                                                                     Aves;
                                                                                                                                                                                                     (Chicken).
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230
330
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314
Institute
                                                                                                                                                                                     Chordata; Craniata; Vertebrata; Euteleostomi; Neognathae; Galliformes; Phasianidae; Phasianinae;
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423
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73.9%;
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s protein (IAP) (Inhibitor
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Repeat;
copyright. It is produced through tute of Bioinformatics and the EM
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                                                                                                                                                                                                                                                                                                                                                                               BIR 1.
BIR 2.
BIR 3.
BIR 3.
RING-TYPE.
D->S: REDUCED INT
E->S: DECREASED INT
E->S: DECREASED INT
E->C (IN REF. ...
O -> P (IN REF. ...
O -> P (IN REF. ...
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                                                                                                                                                                                                                                                                    PRT;
                                                                                                                                                                                                                                                                                                                                                                         -> C (IN REF. 1).
-> P (IN REF. 2).
9D394C16D45EB635
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Thiol protease inhibitor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ωω
                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                      , Connick T.E., that is expres:
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                                                                                                                                                                                                                                                                                                                                                          DB
                                                                                                                                                                                                                                                                                                                                                  9e-17
                                                                                                                                                                                                                                                                                                                                                                                                                 INTERACTION WITH PRSS25
                                                                                                                      expressed
                                                                                                                                                                                                                                                                                                                                                                                                          INTERACTION WITH
                                                                                                                                                                                                                                                                                                                                                          Length 497;
                                                                                                                                                                                                                             of.
                                                                                                                                                                                                                                                                                                                                                                           CRC64;
                                                                WITHIN 4-8
                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                              Lowenthal
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EMBL
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       a collaboration
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Best Local S
Matches 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DOMAIN
ZN_FING
SEQUENCE
                                                                                                                                                                                                                                                                                       060989; 008865;
01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Baculoviral IAP repeat-containing protein 4 ()
protein 3) (X-linked inhibitor of apoptosis p)
(IAP homolog A) (MIAP3) (MIAP-3).
                                                                                                                   receptor associated factors.";

and Sci. U.S.A. 93:4974-4978(1996).
                                                                 Farahani R., Lefebvre C., Submitted (JUN-1997) to t -- I- FUNCTION: Apoptotic s
                                                                                                                                               Uren A.G., Pakusch M., Hawkins C.J., Puls K.L., "Cloning and expression of apoptosis inhibitory function to inhibit apoptosis and/or bind tumor
                                                                                                                                                                                  SEQUENCE FROM N.A.
STRAIN-C57BL/6 X CBA; TISSUE-Liver;
MEDLINE-96209843; PubMed-8643514;
                                                                                                                                                                                                                                                                                                                                                                                        MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PROSITE; PS01282; BIR_REPEAT_1; 3.
PROSITE; PS50143; BIR_REPEAT_2; 3.
PROSITE; PS50209; CARD; 1.
PROSITE; PS00518; ZF_RING_1; FALSE_NEG.
PROSITE; PS50089; ZF_RING_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL;
                                                                                                                                                                                                                                              Mammalia;
                                                                                                                                                                                                                                                        Eukaryota;
                                                                                                                                                                                                                                                                   Mus musculus (Mouse).
                                                                                                                                                                                                                                                                              BIRC4 OR API3 OR XIAP OR AIPA OR MIHA.
                                                                                                                                                                                                                                                                                                                                                                           BIR4_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Apoptosis;
REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               entities requires a license agreement (or send an email to license@isb-sib.ch)
                                                                                                      SEQUENCE FROM N
                                                                                                                                                                                                                                NCBI_TaxID=10090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pfam;
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                                                                                                                                                                                                                                                                                                                                                                                                                                196 VAKAGLDDLGTADKVACVNCGVKLSNWEPKDNAMSEHRRHEPNCPF
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                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 LARAGFYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCPF
(By similarity).

(By similarity).

SUBUNIT: Interacts with SMAC and with PRSS25; these interactions inhibit apoptotic suppressor activity (By similarity).

SUBCELLULAR LOCATION: Cytoplasmic (By similarity).

SUBCELLULAR LOCATION: Cytoplasmic sufficient to inhibit caspase-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pro; IPR001370; BIR. Prop; IPR001315; CARD; IPR001841; Znf_]
Pro; IPR001841; Znf_]
Pr00097; zf-C3HC4; I
Pr00619; CARD; 1.
Pr00653; BIR; 3.
Pr SM00238; BIR; 3.
PR SM00238; BIR; 3.
PR SM00238; BIR; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               U27466; AAB48118.1;
Q13490; 1QBH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                             Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Zinc-finger; Repeat; Nuclear 30 97 BIR 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            611 AA;
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                                                                                                                                                                                                                                                                                                                                                                          STANDARD;
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329
536
                                                                                                                                                                                                                                             Chordata;
Rodentia;
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CARD.
Znf_ring.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          71.08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              69009 MW;
                                                                            the
                                                                  suppressor.
                                                               Korneluk R.G., Mackenmie A.E.;
he EMBL/GenBank/DDBJ databases.
uppressor. Inhibitor of caspase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ū
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BIR 1.
BIR 2.
BIR 3.
CARD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 191;
Pred. No. 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RING-TYPE.
53FC9136F34EBDDD
                                                                                                                                                                                                                                            Craniata; Vertebrata; | Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                          496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein.
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.2e-1";
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                                                                                                                                                                                                                                                                                                    (Inhibitor of apoptosis protein) (X-linked IAP)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                               Vaux D.L.;
protein homolognerosis factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
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                                                                 caspase-3,
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; Murinae; Mus
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RESULT BIR4_RA

LT 9

RRR OCC OC DE PR

Eukaryota; Metazoa; Chor. Mammalia; Eutheria

Rodentia; Chordata;

Craniata; Ver Sciurognathi;

Vertebrata; chi; Muridae;

Eutelecstom1;

SEQUENCE FROM N.A NCBI_TaxID=10116; BIR4_RAT STANDARD; PRT; 496
Q9R016;
16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence upds
15-UUN-2002 (Rel. 41, Last annotation up
Baculoviral IAP repeat-containing proteip
protein 3) (X'Ilnked inhibitor of apopto
(IAP homolog A) (RIAP3) (RIAP-3).
BIRC4 OR API3 OR XIAP.

ation update) g protein 4 (I f apoptosis pr

protein)

(Inhibitor of apoptosis protein) (X-linked IAP)

update)

496

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                                                                     Query Match
Best Local S
Matches 33
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Interpro; IPR001370; BIR.
Interpro; IPR001841; Znf_ring.
Interpro; IPR001841; Znf_ring.
Interpro; IPR001841; Znf_ring.
Interpro; IPR001841; Znf_ring.
Interpro; IPR00184; IRR; 3.
SMART; SM00238; BIR; 3.
SMART; SM00184; RING; 1.
SMART; SM00184; RING; 1.
SMART; SM00184; BIR_REPEAT_1; 3.
PROSITE; PS01282; BIR_REPEAT_2; 3.
PROSITE; PS0143; BIR_REPEAT_2; 3.
PROSITE; PS01018; ZE_RING_1; FALSE_NEG.
PROSITE; PS00189; ZE_RING_2; 1.
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ZN_FING
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REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               between the Swiss Institute of Bioinformatthe European Bioinformatics Institute. Then use by non-profit institutions as long a modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL; U36842;
EMBL; U88990;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the El
                                                                                                                                            SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      entities requires a license agreement
 184
LASAGLYYTGADDQVQCFCCGGKLENWEPCDRAWSEHRRHFPNCFF
                  LARAGFYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCPF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q13490;
                                                                                     Similarity
                                                                                                                                                                               163
163
204
208
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317
322
346
346
449
                                                                      Conservative
                                                                                                                                                                490
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AAB58376.1; -.
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                                                                                     69.58;
                                                                                                                                                                                                                                                                                                                                                                                                             Repeat.
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                                                                     Score 187; DE
Pred. No. 8.5e
1; Mismatches
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12;
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are mediated by
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RESULT 10
BIR8_HUMAN
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Best Local S
Matches 33
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L. Submitted (OCT-1999) to the EMBL/GenBank/DDBJ databases.
C-1- FUNCTION: Apoptotic suppressor: Inhibitor: of caspase-3, -7 and -9
C (By similarity).
C-1- SUBUNIT: Interacts with SMAC and with PR(S25; these interactions.
C inhibit apoptotic suppressor activity (By similarity).
C-1- SUBCELLULAR LOCATION: Cytoplasmic (By similarity).
C-1- SUBCELLULAR LOCATION: Cytoplasmic (By similarity).
C-1- DOMAIN: The second BIR domain is sufficient to inhibit caspase-3
and -7, while the third BIR is involved in caspase-9 inhibition.
C The interactions with SMAC and PRS25 are mediated by the second and third BIR domains (By similarity).
C-1- SIMILARITY: BELONGS TO THE IAP FAMILY.
C-1- SIMILARITY: CONTAINS 3 BIR REPEATS.
C-1-- SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
                                                                                                                                                                                                                                           096P00; 096RW5;
15-JUN-2002 (Rel. 41, Created)
15-JUN-2002 (Rel. 41, Last sequence
15-JUN-2002 (Rel. 41, Last annotation
Baculoviral IAP repeat-containing polike protein 2) (IAP-like protein 2 inhibitor of apoptosis).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             InterPro; IPR001841; Znf_ring.
Pfam; PF00097; zf-C3HC4; 1.
Pfam; PF00053; BIR; 3.
SMART; SM00238; BIR; 3.
SMART; SM00238; BIR; 3.
SMART; SM00184; RING; 1.
PR051TE; PS01282; BIR_REPEAT_1; 3
PR051TE; PS50143; BIR_REPEAT_2; 3
PR051TE; PS50181; ZF_RING_1; FALSI
PR051TE; PS50089; ZF_RING_2; 1.
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ZN_FING
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 This SWI
between
                                                             SEQUENCE FROM N. TISSUE-Testis; PubMed-11597143;
                                                                                                                                                                 Homo sapiens (Human).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        use by non-profit institutions as long a modified and this statement is not removed. entities requires a license agreement (See
Lagace M., Xuan J.-Y., Young S.S., McRoberts Rajcan-Separovic E., Korneluk R.G.; "Genomic organization of the X-linked inhibit
                                                                                                                                NCBI_TaxID=9606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL; AB033366;
HSSP; Q13490; 1C
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REPEAT
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InterPro; IPR001370; BIR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      184 LASAGLYYTGIDDQVQCFCCGGKLKNWEPCDRAWSEHRRHFPNCFF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 LARAGFYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFENCPF
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                                                                                                                                                                                                                                                                                                                                                                                                      HUMAN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; Zinc-finger; Repeat.
26 93 BIF
163 230 BIF
264 329 BIF
449 484 RIN
496 AA; 56072 MW; I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                      N.A.
                                                                                                                                                                                                                                                                                                                                                                                                   STANDARD;
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    Last sequence update)
    Last annotation updat

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71.7%;
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BIR 2.
BIR 3.
BIR 3.
RING-TYPE.
RING-TYPE.
W; E250E3C77461A469 CRC64;
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Pred. No. 1.5e-16;
1; Mismatches 12
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Catarrhini; Hominidae;
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2) (ILP-2) (Testis-speci
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of apoptosis
                                       Maier J.,
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D BIR8_PANTR

C Q95M72;
C Q95M72;
T 15-JUN-2002 (Rel. 41, Created)
DT 15-JUN-2002 (Rel. 41, Last sequence update)
DT 15-JUN-2002 (Rel. 41, Last annotation update)
DE Baculoviral IAP repeat-containing protein 8 (
DE like protein 2) (IAP-like protein 2) (ILP-2).
GN BIRC8 OR ILP2
OS Pan troglodytes (Chimpanzee).
CS Pan troglodytes (Chimpanzee).
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Matches 25
[1]
SEQUENCE FROM N.A.
SEQUENCE FROM N.A.
MEDLINE=21286921; PubMed=1139065
Richter B.W.M., Mir S.S., Eiben
Richter B.W.M., Mir S.S., Eiben
Townstein A., Tian L., Frank S.,
Vezzoni P., F
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EMBL; AF164682; AAK818992.1; -.
Genew; HGNG::14878; BIRCS
InterPro; IPR001370; BIR.
InterPro; IPR001841; Znf_ring.
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Pfam; PF00097; zf-C3HC4; 1.
PROSITE; PS01282; BIR_REPEAT_1; 1.
PROSITE; PS50143; BIR_REPEAT_2; 1.
PROSITE; PS00518; ZF_RING_1; FALSE_NEG.
PROSITE; PS50089; ZF_RING_2; 1.
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Genomics 77:181-188(2001).
[2]
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               apoptosis protein family.";
Mol. Cell. Biol. 21:4292-4301(2001).
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   Eiben L.J., Lewis J., Reffey S.B., nk S., Youle R.J., Nelson D.L., P., Fearnhead H.O., Duckett C.S.;
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RING-TYPE.
Y -> H (IN
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                                                                                                          Craniata; Vertebrata; Catarrhini; Hominidae
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CB7F034B0DDFAD9D
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g protein 8 (1
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O55M71;
15-JUN-2002 (Rel. 41, Created)
15-JUN-2002 (Rel. 41, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation updat
Baculoviral IAP repeat-containing protein 8
like protein 2) (IAP-like protein 2) (ILP-;
       similarity).

-!- SUBCELLULAR LOCATION: Cytoplasmic (Probable;).
-!- SUBUNIT: Binds to caspase-9 (By similarity).
-!- SIMILARITY: BELONGS TO THE IAP FAMILY.
-!- SIMILARITY: CONTAINS 1 BIR REPEAT.
-!- SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
                                                                                   Richter B.W.M., Mir S.S., Eiben L.J., Lewis J., Frankthol A., Tian L., Frank S., Youle R.J., Nels Notarangelo L.D., Vezzoni P., Fearnhead H.O., Du "Molecular cloning of ILP-2, a novel member of apoptosis protein family.";
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       apoptosis protein family.";
Mol. Cell. Biol. 21:4292-4301(2001).
-!- FUNCTION: Protects against apopt
                                                                                                                                                                               Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        PROSITE; PS01282; BIR_REPEAT_1; 1.
PROSITE; PS00143; BIR_REPEAT_2; 1.
PROSITE; PS00518; ZF_RING_1; FALSE_NEG
PROSITE; PS50089; ZF_RING_2; 1.
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PF00097; zf-C3HC4;
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ta; Metazoa; Chordata; Craniata; Vertebrata;
a; Eutheria; Primates; Catarrhini; Hominidae;
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IPR001841; Znf_ring.
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236
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Pred. No.
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Matches 24
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                                                                                                                                                                          PROSITE; PS01282; BIR_REPEAT_1; FALSE_NEG
PROSITE; PS01843; BIR_REPEAT_2; 1.
PROSITE; PS00518; ZF_RING_1; FALSE_NEG.
PROSITE; PS50089; ZF_RING_2; 1.
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REPEAT
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InterPro; IPR001841;
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                                            LARAGFYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCPF
                               LARAGFYAIGQEDKIQCFHCGGGLANWKPKEDPWEQHAKWYPGCXY
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PF00097; zf-C3HC4;
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236
                                                                               Conservative
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27120 MW;
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52.2%;
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Pred. No. 7.7e
9; Mismatches
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RING-TYPE.
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No. 7
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BIR1_HUMAN
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"Sequence of a 131-kb region of atrophy candidate genes SMN and Genomics 48:121-127(1998).
                                                  Chen Q., Baird S.D., Mahadevar Xuan J.-Y., Kang X., Lefebvre MacKenzie A.E.;
                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa;
Mammalia; Eutheria;
NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-NOV-1997 (Rel. 35, Created):
16-OCT-2001 (Rel. 40, Last annotation
15-JUN-2002 (Rel. 41, Last annotation
Baculoviral IAP repeat-containing prot
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Q13075; Q13730;
Q1-NOV-1997 (Re
                                                                                                           MEDLINE=98163755; PubMed=9503025;
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MEDLINE-95112344; PubMed-7813013;
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Catarrhini;
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                                                                                                                                                                                                                                                                                                                                                                                                                                Vertebrata; Euteleostomi;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 (Neuronal apoptosis
                                                                                                                                                                                                                                                                                                                                                                                                                Hominidae;
                                                                       Korneluk
                                        the
                                      spinal muscular
                                                                         Farahani
k R.G.,
                                                                                                                                                                                                                         partially
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der Steege G., Draai Anzevino R., Velona Buys C.H.C.M.; Submitted (MAY-1995) [4]

(MAY-1995) to

the

EMBL/GenBank/DDBJ databases

SEQUENCE OF

386-623

06-623 FROM Draaijers Melona I., E

M N.A. s T.G., Brahe

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Grootscholten P.

Ommen (

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Jones K.,
Submitted
                                                                                                                                                                                                                                      PROSITE;
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                                                                                                                                                                                                                                                                                                    MIM;
                                                                                                                                                                                                                                                                                                                                                                                              modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                           REPEAT
                                                                                                                                                                                                                                                            InterPro; IPR001370; BIR. Pfam; PF00653; BIR; 3. SMART; SM00238; BIR; 3.
                                                                                                                                                                                                                                                                                                              Genew;
                                                                                                                                                                                                                                                                                                                       EMBL; U80017; AAC52047.1;
EMBL; U21913; AAA64504.1;
EMBL; AC005031; AAC62261.1
HSSP; Q13490; 1QBH.
                                                                                                                                                                                                                                                                                                                                                                        EMBL; U19251; AAC52045.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                 the European Bioinformatics Institute. The use by non-profit institutions as long
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    family of IAP genes.";
Nature 379:349-353(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Farahani R., McLean M., I)
"Suppression of apoptosis
family of IAP genes.":
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                                                                                                                                                                                          REPEAT
                                                                                                                                                                                                    Apoptosis;
REPEAT
                                                                                                                                                                                                                            PROSITE;
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SPINAL MUSCULAR ATROPHY TYPE I (SMA TYPE 1). SMAS INDIVIDUALS WITH SPINAL MUSCULAR ATROPHY TYPE I (SMA TYPE 1). SMAS ARE FATAL AUTOSOMAL RECESSIVE DISORDERS SUBCLASSIFIED AS TYPE 1 (WERDNIG-HOFFWANN DISEASE), TYPE II (INTERMEDIATE FORM), AND TYPE III (WOHLFART-KUGELBERG-WELANDER DISEASE) BASED UPON THE AGE OF ONSET AND CLINICAL SEVERITY. THESE NEURODEGENERATIVE DISORDERS ARE CHARACTERIZED BY DEGENERATION OF LOWER MOTOR NEURONS, LEADING TO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SIMILARITY: CONTAINS 3 BIR REPEATS. SIMILARITY: CONTAINS 1 NACHT DOMAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TISSUE SPECIFICITY: EXPINEURONS. FOUND IN LIVER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FUNCTION: PREVENTS
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          LARAGEYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFFNCPF
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LAKAGLFYTGIKDIVQCFSCGGCLEKWQEGDDPLDDHTRCFPNCPF
                                                                                                                                                                                                                                                                                                            Q13490; 1QBH.
HGNC:7634; BIRC1.
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., Graves T.,
ed (JUN-1998)
                                                       Similarity
                                                                                                                                                                                                                            PS50143;
PS50837;
                                                                                                                                                                                                                                                  PS01282; BIR_REPEAT_1;
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278
464
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                                             Conservative
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                                                                                                                                                                                                                                      BIR_REPEAT_2;
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, Tamai K., Lefe
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                                                        55.4%;
54.3%;
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to the EME
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Ikeda J., Mackenzie A.,
is in mammalian cells by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EXPRESSED
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BIR 2.
BIR 3.
NACHT.
PK ->
VP ->
VP ->
VP ->
VP -> V
                                          Score 149; DB 1;
Pred. No. 2.1e-11;
6; Mismatches 1:3
                                                                                          M -> V (IN REF. 3).
Y -> H (IN REF. 3).
MISSING (IN REF. 4).
MW; 566304C154DA5E64 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S., Cherton-Horvat G., Korneluk R.G.;
NAIP and a related
                                                                  Length 1403;
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                                             Indels
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RESULT 14 BIRG_MOUSE

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SEQUENCE
                                                                                                     Q9QWK5; Q9R017; Q9JIB5;
16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Baculoviral IAP repeat-containing protein la
                                                                                                                                                                                                                                                                                                                                                  Apoptosis;
REPEAT
REPEAT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                    PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; AF242433; AAF82749.1;
HSSP; Q13490; 1QBH.
MGD; MGI:1858256; Birclg.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Endrizzi M.G., Hadinoto V., Growney J.D "Genomic sequence analysis of the mouse Genome Res. 10:1095-1102(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           inhibitory protein BIRC1G OR NAIP7.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15-JUN-2002 (Rel. 41, Last annotation update) Baculoviral IAP repeat-containing protein 1g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BIRG_MOUSE
 Yaraghi
                                               Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                               inhibitory protein 1).
BIRC1A OR NAIP1 OR NAIP.
                                                                                                                                                               BIRA_MOUSE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=10090;
              SEQUENCE FROM
                                                                       Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                         REPEAT
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                                                                                                                                                                                                                                                                                                                                                                                                                       SMART; SM00238; BIR;
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Pfam; PF00653; BIR; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           16-OCT-2001
15-JUN-2002
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24; Conservative
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   Korneluk
              N.A.
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70; BIR.
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41, Last annotation
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                                                                                                                                                                                                                                                                                                                                                                           Multigene family.
                                                Chordata;
Rodentia;
                                                                                                                                                                                                                                                                              52.4%;
   R.G.,
                                                                                                                                                                                                                                                                                                                    159662 MW;
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1 NACHT DOMAIN.
                                                                                                                                                                                                                                                                   Score 141; DB Pred. No. 2.2e 4; Mismatches
    MacKenzie
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BIR 2.
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Sciurognathi; Muridae;
                                                Craniata; Vertebrata;
Sciurognathi; Muridae
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                                                 Muridae;
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                                                                                                         (Neuronal apoptosis
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; Murinae; Mus.
                                                             Euteleostomi;
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EMBL; AF135491; AAD56763.1; -.
EMBL; AF244432; AAF82752.1; -.
HSSP; Q13490; 1QBH.
MGD; MGI:1298223; Bircla.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       the European Bioinformatics Institute. The use by non-profit institutions as long modified and this statement is not removed. entitles requires a license agreement (See or send an email to license@isb-sib.ch).
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MEDLINE=20414747; PubMed=10958627;

Endrizii M.G., Hadinoto V., Growney J.D., Miller W., Dietrich W.F.;

"Genomic sequence analysis of the mouse Naip gene array.";

"Genome Res. 10:1095-1102(2000).

Genome Res. 10:1095-1102(2000).
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REPEAT
                                                                                                                                                                                                                                                                                                                                                                                          DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Apoptosis;
REPEAT
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PROSITE; PS50143; BIR_REPEAT_2; 3.
PROSITE; PS50837; NACHT; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               InterPro; IPRO01370; BIR. Pfam; PF00653; BIR; 3. SMART; SM00238; BIR; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the Enthe European Bioinformatics Institute. There are no restructed the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the surpression of the su
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-!- SIMILARITY: CONTAINS 3 BIR REPEATS.
-!- SIMILARITY: CONTAINS 1 NACHT DOMAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Huang S., Scharf J.M., Growney J.D., Endrizzi M.G., Dietrich W.F.; "The mouse Naip gene cluster on Chromosome 13 encodes several distinct functional transcripts."; Mamm. Genome 10:1032-1035(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "Cloning and characterization of the multiple copies of the murine homologue of NAIP (neuronal apoptosis inhibitory protein)."; Submitted (JUN-1997) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A. MEDLINE-99431676; PubMed-10501978;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -1- FUNCTION: PREVENTS MOTOR-NEURON APOPTOSIS INDUCED BY A VARIETY OF
181 LSAAGFVFTGKRDTVQCFSCGGSLGNWEEGDDPWKEHAKWFPKCEF 226
                      1 LARAGFYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCPF 46
                                                                                   Similarity 52.2
24; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                          Repeat;
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                                                                                                                                                                                           1140
1269
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BIR 2.
BIR 3.
NACHT
I -> V (7
L -> O (7
E -> F
29
L -> F
29
L -> F
29
MW;
                                                                                                   52.4%;
52.2%;
                                                                                 Score 141; DB
Pred. No. 2.2e
4; Mismatches
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Pfam; PF000619; CARD; 1.

Pfam; PF00097; Zf-C3Hd4; 1.

SMART; SM00238; BIR; 3.

SMART; SM00114; CARD; 1.

SMART; SW00114; RING; 1.

SMART; SW00184; RING; 1.

PROSITE; PS01282; BIR_REPEAT_1; 2

PROSITE; PS50143; BIR_REPEAT_2; 3

PROSITE; PS50209; CARD; 1.

Zinc-finger
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Q9ESE8;
01-MAR-2001 (TrEMBLrel. 16, Created)
01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
Inhibitor of apoptosis protein 2.
Rattus norvegicus (Rat).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rat
NCBI_TaxID-10116;
                                                                                                                                           SEQUENCE
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   Conservative
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                                                                                                                                           66750 MW;
                                       90.3%;
Score 243; DB 11;
Pred. No. 4.9e-23;
3; Mismatches 3;
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SMART; SM00138; BIR; 3.
SMART; SM00114; CARD; 1.
SMART; SM00184; RING; 1.
SMART; SM00184; RING; 1.
PROSITE; PS01282; BIR_REPEAT_1; 3
PROSITE; PS0143; BIR_REPEAT_2; 3
                                                                                                                                                                                                                                                                                                   BIRC2.
Mus musculus (Mouse).
Mus musculus (Mouse).
Metazoa; Chordata;
Metazoa; Rodentia;
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Submitted (SEP-1999) to t
-!- SIMILARITY: CONTAINS
                                                                                                                                  EMBL;
                                                                                                                                                                        Strausberg
Submitted :
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01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
Similar to baculoviral IAP repeat-containing 2
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Zinc-finger
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Pfam; PF00619; CARD;
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01-MAY-2000 (TREMBLIEL 13,
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"Cloning of cDNA fo
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                                                                 Submitted (JUL-2001) to the EMBL; BC011338; AAH11338.1; MGD; MGI:1197007; Birc2. InterPro; IPR001370; BIR.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  176
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                                         PF00653;
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PS01282; BIR_REPEAT_1; UNKNOWN_3
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IPR001370; BIR.
IPR001315; CARD.
IPR001841; Znf_1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     589
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Rodentia;
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rat inhibitor of apoptosis protein
to the EMBL/GenBank/DDBJ databases.
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Pred. No. 4
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Best Local S
Matches 39
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Best Local S
Matches 41
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O91A70
O91A70:
01-OCT-2000 (TrEMBLrel. 15
01-OCT-2000 (TrEMBLrel. 15
01-DEC-2001 (TrEMBLrel. 15
01-DEC-2001 (TrEMBLREL. 1)
Inhibitor of apoptosis 1 (Gallus gallus (Chicken).
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HSSP; Q13490; 1QBH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Holcik M., Letebvie c.A., "Cloning and Characterization of the R"Cloning and Genes.";
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01-MAR-2001 (TrEMBLrel. 21, Las
01-JUN-2002 (TrEMBLrel. 21, Las
101-JUN-2002 (TrEMBLrel. 5)
Inhibitor of apoptosis protein
Rattus norvegicus (Rat)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SMART; SM00238; BIR; 3.
SMART; SM00114; CARD; 1
SMART; SM00184; RING; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Apoptosis Protein 1, 2, and 3 Genes.;
Submitted (SEP-1999) to the EMBL/GenBank/DDBJ databases.
-!- SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
EMBL; AF183430; AAG22970.1; -.
    STRAIN-BREED LEGHORN;
                                                                                                                               Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro; IPR001370; BIR.
InterPro; IPR001315; CARD.
InterPro; IPR001841; Znf_r
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rat
                        SEQUENCE FROM N.A.
                                                              NCBI_TaxID=9031;
                                                                                       Gallus
                                                                                                       Archosauria; Aves;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Zinc-finger
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROSITE; PS50209;
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                                                                                                         Chordata; (
Neognathae;
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    TISSUE-SPLEEN
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19,
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16, Last sequence update)
21, Last annotation update)
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Last annotation update)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 236; DB
Pred. No. 4e-2:
4; Mismatches
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Pred. No. 5.
                                                                                                                                                                                                                                                                                 PRT;
                                                                                                                               Craniata;
                                                                                                         Praniata; Vertebrata; Euteleostomi; Galliformes; Phasianidae; Phasiani
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088642;
088642;
01-NOV-1998
01-NOV-1998
01-JUN-2002
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SEQUENCE FROM N.A.
SEQUENCE FROM N.A.
STRAIN-BREED FAYOUMI; TISSUE-SPLEEN;
MEDLING-21158006; PubMed-11261557;
MEDLING-21158006; PubMed-11761557;
MEDLING-21158006; PubMed-11761569;
MEDLING-21158006; PubMed-1176169;
MEDLING-
                                                                                                                                                                                                                                                                                                                                                                                                                                           PROSITE; PS01282; BIR_REPEAT_1; PROSITE; PS50143; BIR_REPEAT_2; NON_TER 1
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01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
Inhibitor of apoptosis 1 (Fragment).
Gallus gallus (Chicken).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pfam; PF00653; BIR; 2.
SMART; SM00238; BIR; 2.
PROSITE; PS01282; BIR_REPEAT_1;
PROSITE; PS50143; BIR_REPEAT_2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Poult. Sci. 80:284-288(2001).
EMBL; AF221083; AAF35320.1; -.
HSSP; Q13490; 1QBH.
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Poult. Sci. 80:
                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa;
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HSSP; Q13490; 1QBH.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "Genetic variation among chicken lines and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=9031;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   InterPro; IPR001370; BIR.
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; SM00238; BIR; 2.
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37; Conserv
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197 AA;
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195 AA;
(TrEMBLrel.)
(TrEMBLrel.)
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                                                                                             PRELIMINARY;
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                                                                                                                                                                                                                                                                                                                                                                                                   22602 MW;
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Created)
Last sequence update;
Last annotation update
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                                                                                                                                                                                                                                                                                                                            Score 228; DB 13; Pred. No. 1.3e-21;
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                                                                                             PRT;
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                                                                                                                                                                                                                                                                                                                                                                                                 D7923DABCF623E1A CRC64;
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mes; Phasianidae; Phasiani
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upda::e)
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RESULT 9
057319
ID 0573
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RESULT
Q9DDN2
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Best Local
                                                                                                                                           InterPro; IPR001370; BIR.

pfam; pf00653; BIR; 3.

SMART; SM00238; BIR; 3.

SMART; SM00238; BIR; 3.

PROSITE; PS01282; BIR_REPEAT_1; 1

PROSITE; PS50143; BIR_REPEAT_2; 3

NON_TER 324 324

SEQUENCE 324 AA; 36567 MW; 5E;
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01-MAR-2001
01-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-MAR-2001 (TrEMBLrel 16, 01-MAR-2001 (TrEMBLrel 16, 01-DEC-2001 (TrEMBLrel 19, Apoptosis inhibitor ch-IAPI Gallus gallus (Chicken).
                                                                                                                                                                                                                                                                       Pendleton C.N., Bargmann W.J., Varadarajan J., Bose H.K. Jr.;
"The apoptosis inhibitor ch-IAP1 is a direct transcriptional target of v-Rel and C-Rel.";
Submitted (OCT-2000) to the EMBL/GenBank/DDBJ databases.
EMBL; AF311289; AAG42316.1;
HSSP; Q13499; 10BH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Cloning and characterisation of an inhibitor (IAP) in the rat corpus luteum."; Submitted (AUG-1998) to the EMBL/GenBank/DDBJ EMBL; AF081503; AAC32497.1; -. HSSP; Q13490; 1QBH.
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STRAIN-WISTAR; TISSUE-OVARY;
Bradley C.K., Lareu R.R., Dharmarajan A.M.;
Bradley C.K., Lareu R.R., Dharmarajan A.M.;
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NON_TER 1 1
NON_TER 224 224
SEQUENCE 224 AA; 25209 MW; :
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Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Inhibitor of apoptosis RIAP1.
Rattus norvegicus (Rat)
                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Archosauria; Aves;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa;
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                                                                                                                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=9031;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                     1 LARAGEYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCPF 46
                                                                        37; Conservative
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37; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                             Neognathae;
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Rodentia;
                                                                                       84.8%;
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                                                                        Score 228; DB 13;
Pred. No. 2.2e-21;
5; Mismatches 4;
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Last annotation update)
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Pred. No. 1.5e-21;
3; Mismatches 6;
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; Galliformes; Phasianidae; Phasiani
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                                                                                                          Length 324;
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AC Q8UWD
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Pfam; PF00097; zf-C3H44; 1
SMART; SM00238; BIR; 3.
SMART; SM00114; CARD; 1.
SMART; SM00184; RING; 1.
                                     Q8UWD2;
Q8UWD2;
01-MAR-2002
01-MAR-2002
01-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                              REPEAT
ZN_FING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -1- DOMAIN: THE RING FINGER IS IMPORTANT FOR -1- SIMILARITY: MEMBER OF THE IAP FAMILY. -1- SIMILARITY: CONTAINS 3 BIR DOMAINS (BACUL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      You M., Ku P.-T., Hrdlickova R., Bose H.R. JT.;
"ch-IAP1, a member of the inhibitor-of-apoptosis protein family, imediator of the antiapoptotic activity of the v-Rel oncoprotein.";
Mol. Cell. Biol. 17:7328-7341(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STRAIN=WHITE LEGHORN; TISSUE=EMBRYONIC FIBROBLAST; MEDLINE=98038801; PubMed=9372964;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gallus gallus (Chicken).
Eukaryota; Metazoa; Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IAP1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-JUN-1998 (TrEMBLrel.
01-JUN-2001 (TrEMBLrel.
Inhibitor of apoptosis)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             057319;
01-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HSSP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=9031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PROTEINE).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  InterPro;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Archosauria; Aves;
                                                                                                                                                                                                                                     196
                                                                                                                                                                                                                                                         1 LARAGFYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCPF 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APOPTOSIS PROTEIN REPEAT).
SIMILARITY: CONTAINS A C3HC4-CLASS
L; AF008592; AAB88044.1; -.
P; Q13490; 1QBH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SUBCELLULAR LOCATION: EXPRESSED PREDOMINANTLY IN THE V-REL-TRANSFORMED CELLS.
TISSUE SPECIFICITY: EXPRESSED AT RELATIVELY HIGH SPLEEN, THYMUS, BURSA, INTESTINE, AND LUNG, AND FINTESTIS, BRAIN, AND SKELETAL MUSCLE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 INDUCTION: INDUCED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FUNCTION: SUPPRESSOR OF APOPTOSIS IN ONCOPROTEIN V-REL-TRANSFORMED
                                                                                                                                                                                                                                   LAKAGLYYLGTADKVACFTCGGQLSNWEPKDNAMSEHRRHFPNCPF
                                                                                                                                                                                                                                                                                                                        . Similarity 37; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PS50143; BIR_REPEAT_2; PS50209; CARD; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IPR001370; BIR.
IPR001315; CARD.
IPR001841; Znf_r1ng.
                                        (TrEMBLrel.) (TrEMBLrel.)
                                                                                                                                                                                                                                                                                                                                                                                                            610
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30 97
                                                                                                                                                                                                                                                                                                                        Conservative
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176
262
563
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                                                                                                                               PRELIMINARY;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BIR; 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BIR_REPEAT_1;
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                                                                                                                                                                                                                                                                                                                                                                                                          68924 MW;
                                                                                                                                                                                                                                                                                                                                         84.8%;
                                                                                                                                                                                                                                                                                                                                                                                               r; Repeat.

BIR REPEAT 1.

BIR REPEAT 2.

BIR REPEAT 3.

C3HC4-TYPE.

C3HC4-TYPE.

B924 MW; ADF47619650B44A6 CRC64;
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06, Last sequence urdate)
17, Last annotation update)
PROTEIN 1 (IAP) (Inhibitor of T cell apoptosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DURING THE V-REL-MEDIATED
                                        20,
20,
21,
                                                                                                                                                                                                                                                                                                                   ; Score 228; DB
; Pred. No. 4.4e
5; Mismatches
                                     Created)
Last sequ
Last anno
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; Galliformes; Phasianidae; Phasiani
                                        sequence update)
annotation update)
                                                                                                                            628
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (BACULOVIRAL
                                                                                                                                                                                                                                                                                                                                         DB 13;
1.4e-21;
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                                                                                                                                                                                                                                                                                                                                                              610;
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TO
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                                                                                                                                                                                                                                                                                                                   Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
Matches 32; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pfam; PF00619; CARD; 1.
Pfam; PF00097; zf-C3HC4; 1
SMART; SM00238; BIR; 3.
SMART; SM00114; CARD; 1.
SMART; SM00184; RING; 1.
                     PROSITE;
PROSITE;
PROSITE;
                                                                                                                                                            (IAP3).";
Submitted (NOV-2001) to the ENER; AP451854; AAL47170.1; -...
InterPro; IPR001370; BIR.
InterPro; IPR001841; Znf_ring.
                                                                                                                                                                                                                                                                                                                                                                                                                 Gallus gallus (Chicken).
Enkarvota; Metazoa; Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q8UVF8;
01-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Brachydanio rerio (Zebrarish)
Eukaryota; Metazoa; Chordata;
Actinopterygii; Neopterygii;
                                                                                  SMART; SM00238; BIR; 3.
SMART; SM00184; RING; 1.
                                                                                                                       Pfam; PF00653; BIR; 3.
Pfam; PF00097; zf-C3HC4; 1.
                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
Bridgham J.T., Johnson
                                                                                                                                                                                                                                                                                                                                                                               Archosauria;
Gallus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-MAR-2002
01-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q8UVF8
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Inohara N., Nunez G.;
Submitted (NOV-2001) to the
EMBL; AF442500; AAL33679.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Cyprinidae; Dani
NCBI_TaxID=7955;
                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=9031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cell Death Differ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE-20373792; PubMed-10917738; Inohara N., Nunez G.; "Genes with homology to mammalian gahrafish ".
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro; IPR001841; ofam; PF00653; BIR; 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro; IPR001370; BIR.
InterPro; IPR001315; CARD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   zebrafish.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A. MEDLINE=20373792;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     nhibitor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            207
                                                                                                                                                                                                                                                                        ridgham J.T., Johnson A.L.; Identification of chicken i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PS01282; BIR_REPEAT_1;
PS50143; BIR_REPEAT_2;
PS50209; CARD; 1
PS01282; BIR_REPEAT_1;
PS50143; BIR_REPEAT_2;
PS50089; ZF_RING_2; 1.
493 AA; 55251 MW; (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PS50089; ZF_RING_2;
628 AA; 70098 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  of apoptosis
                                                                                                                                                                                                                                                                                                                                                                                                Metazoa;
a; Aves; N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (TrEMBLrel.
(TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           rerio (Zebrafish) (Zebra danio).
Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
gii; Neopterygii; Teleostei; Ostariophysi; Cypriniformes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Danio.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                Neognathae;
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    20, Created)
    20, Last sequence upology
    21, Last annotation upology
    s protein 3.

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                                                                                                                                                                                                                                                                           inhibitor of
                                                                                                                                                                                                                               EMBL/GenBank/DDBJ databases
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Pred. No. 2.5e
8; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                Craniata; Ver; Galliformes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
    030A9F56CB6119BC CRC64;
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                                           UNKNOWN_2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         493
                                                                                                                                                                                                                                                                        apoptosis
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mes; Phasianidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 13;
2.5e-17;
nes 6;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                           protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                        Euteleostomi;
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RESULT 12
Q9ESF0
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Q9EQ05
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PROSITE; PS5
Zinc-finger.
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01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
101-JUN-2002 (TrEMBLrel. 21, Last sequence update)
101-JUN-2002 (TrEMBLrel. 21, Last sequence update)
101-JUN-2002 (TrEMBLrel. 16, Last sequence update)
101-JUN-2002 (TrEMBLrel. 16, Last sequence update)
101-JUN-2002 (TrEMBLrel. 16, Last sequence update)
101-JUN-2002 (TrEMBLrel. 16, Last sequence update)
101-JUN-2002 (TrEMBLrel. 16, Last sequence update)
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101-JUN-2002 (TrEMBLrel. 21, Last annotation update)
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101-JUN-2002 (T
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SMART; SM00184; RING; 1.
SMART; SM00184; RING; 1.
PROSITE; PS01282; BIR_REPEAT_1;
PROSITE; PS50143; BIR_REPEAT_2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Apoptosis Protein 1, 2, and 3 Ger
Submitted (SEP-1999) to the EMBL,
-!- SIMILARITY: CONTAINS 1 RING-7
EMBL; AP183429; AAG22969.1; -.
HSSP; Q13490; 1QBH.
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Pfam; PF00097; zf-C3HC4; 1.
                         -!- SIMILARITY: CONTAINS 1
EMBL; AF304333; AAG41192.1;
HSSP; Q13490; 1QBH.
                                                                                                                                                    Lareu R.R., Bradley C.K., Lacher M., Friis "Cloning, characterization and regulation protein in the rat corpus luteum.", Submitted (SEP-2000) to the EMBL/GenBank/I
                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa;
Mammalia; Eutheria;
NCBI_TaxID=10116;
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01-MAR-2001 (TrEMBLrel. 21, Las
01-JUN-2002 (TrEMBLrel. 21, Las
Inhibitor of apoptosis protein
Rattus norvegicus (Rat)
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                                                                                                                                                                                                                                                                                                                          STRAIN-WISTAR;
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InterPro; IPR001841; Znf_ring.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               184
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 LARAGEYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCPF 46
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33; Conserv
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IPR001370; BIR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      496 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Lefebvre C.A., Hicks K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRELIMINARY;
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                                                                                                                                                                                                                                                                                                              TISSUE-OVARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          56117 MW;
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71.7%;
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71.7%;
                                                                                                                                                                                                                                                                                K., Lacher M., Friis
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                                                                                                                  e EMBL/GenBank/DDBJ databases
RING-TYPE ZINC FINGER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 185; DB
Pred. No. 1.2e
1; Mismatches
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Pred. No. 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Rat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRT;
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.2e-15;
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.8e-16;
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                                                                                                                                                                                                                                              inhibitor
                                                                                                                                                                                                                                     Dharmarajan
inhibitor of
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                                                                                                                                                                                                                                                                                A.M.;
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RESULT
Q96RW5
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Best Local S
Matches 33
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Best Local (
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                                                                                                 Q96RW5;
01-DEC-2001
01-DEC-2001
01-MAR-2002
Eukaryota;
Mammalia; E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    InterPro: IPR001841; Znf_ring.

Pfam; PF00053; B1R; 3.

Pfam; PF00097; zf-C3HC4; 1.

SMART; SM00238; B1R; 3.

SMART; SM00184; RING; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q9EQ04 PRELIMINARY
Q9EQ04;
01-MAR-2001 (TrEMBLrel.
                                                                                                                                                                                   Q96RW5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -!- SIMILARITY: CONTAINS 1 |
EMBL; AF304334; AAG41193.1;
HSSP; Q13490; 1QBH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Inhibitor of apoptosis protein 3.
Rattus norvegicus (Rat).
Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Eukaryota, Metazoa; Chordata; Sclurognathi; Muridae; Murinae; Rat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PROSITE; PS01282; BIR_REPEAT_1; PROSITE; PS50143; BIR_REPEAT_2;
                                                           ILP2.
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SMART; SM00184; RING; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro; IPRO01370; BIR.
InterPro; IPRO01841; Znf_ri
Pfam; PF00653; BIR; 3.
Pfam; PF00097; zf-C3HC4; 1.
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01-JUN-2002 (TrEMBLrel.
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                                                                                IAP-like
                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  linc-finger
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PROSITE; PS50143; BIR_REPEAT_2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                          1 LARAGFYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCPF
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33; Conservative
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                                                                                protein
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  ; Metazoa;
Eutheria;
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Chordata;
Primates;
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71.7%;
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71.7%;
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19,
20,
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Pred. No. 1
Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
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Job time : 12.235 secs
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A Mir S.S., Duckett C.S.;

A Mir S.S., Duckett C.S.;

"Molecular Cloning of human homologs of IAP-like protein.";

I Submitted (JUL-1999) to the EMBL/GenBank/DDB/ databases.

C -!- SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.

R EMBL; AF164682; AAR61892.1; -.

R InterPro; IPR001370; BIR.

R InterPro; IPR001370; BIR.

R Pfam; PF00653; BIR; 1.

Pfam; PF00653; BIR; 1.

Pfam; PF00097; zf-C3HC4; 1.

R PF0SITE; PS01282; BIR_REPEAT_1; UNKNOWN_1.

R PROSITE; PS50143; BIR_REPEAT_2; 1.

W Zinc-finger.

SEQUENCE 236 AA; 27089 MW; DF3A170E0DDFAD9D CRC64;
                                                                                                                                     Query Match 57.6%; Score 155; DB 4; Length 236; Best Local Similarity 54.3%; Pred. No. 4.2e-12; Matches 25; Conservative 8; Mismatches 13; Indels
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Minimum
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Perfect score:
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307
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Gapop 10.0 , Gapext 0.5
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			mutant	wild-t	prosophila melanog		prosophila mutant	Drocophila mutant	hacillovin		inhibitor	1011446	TAP prot	apontosis	inhibitor	inhibitor	Human XIAP protein	Human X-linked inh			inhibitor	apoptosi	HIAP-1 pro	HIAP-2 p		inhibitor	- apoptosis	APIZ-MLT	cystiene t	inhihitor	cellular	Cellula	HTAP-1 DI	ا 🖃	-

ALIGNMENTS

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RESULT 1
AAW13547
ID AAW1
IAP; inhibitor; apoptosis; RING finger domain; restinosis;
myocardial infarction; nephritis; HIV.
                                                                                                                                                                                                                                                                   AAW13547 standard; Protein;
                                                                                                                                                                                                               Human c-IAP1 repeat 1.
                                                                                                                                                                                                                                22-JUL-1997
                                                                                                                                                                                                                                                  AAW13547;
                                                                                      08-DEC-1995;
08-AUG-1995;
                                                                                                                                                     WO9706182-A1
Nucleic acids encoding cellular inhibitor of apoptosis proteins useful for apoptosis regulation in cells to reduce or increase apoptosis and for pharmacological screening
                                                     ¿Goeddel DV,
                                                                                                                  06-AUG-1996;
                                                                                                                                   20-FEB-1997.
                                                                                                                                                                     Homo sapiens
                                   WPI; 1997-154209/14.
                                                                      (TULA-) TULARIK INC.
                                                                                                                                                                                                                                  (first entry)
                                                       Rothe M;
                                                                                        95US-0569749
95US-0512946
                                                                                                                   96WO-US12860
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RESULT 2
AAU02925
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Best Local (
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The nucleic acid is used for recombinant production of human cellular inhibitors of seconds.
        Novel alternative splicing variants e.g. variant of angiotensin converting enzyme (ACEV), useful in identifying candidate compounds capable of binding to the variant and to detect anti-variant antibodies
                                                                                                                                                                                                                                                                                                                                                                                     platelet-derived endothelial cell growth factor; cardiovascular disease; cellular tumour antigen P53; cyclin-dependent kinase inhibitor IC; vasoactive intestinal polypeptide receptor 2; arteriosclerosis; cancer; myocardial infarction; coronary arterial thrombosis; renal disease; diabetic nephropathy; muscular disease; immune disorder; sarcoidosis; multiple sclerosis; immune complex nephritis; deep vein thrombosis; nonarcoidotic pulmonary granulomatous disease; endothelial abnormality;
                                                                                                                                                                                                                                          17-NOV-2000; 2000WO-IL00766.
                                                                                                                                                                                                                                                                                                            WO200136632-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           12-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAU02925 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     inhibitor of apoptosis protein which modulates apoptosis regulation. The nucleic acids are useful in therapies where increased cell-specific apoptosis is desired, e.g. in restinosis, inflammatory disease states, myocardial infarction, glomerular nephritis, transplant rejection and infectious diseases, e.g. HIV. They can also be used in conditions requiring a reduction in
                                                                             N-PSDB;
                                                                                                                         Levine Z,
                                                                                                                                                                                            17-NOV-1999;
10-DEC-1999;
                                                                                                                                                                                                                                                                           25-MAY-2001
                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       granulocyte colony stimulating factor receptor glucagon; hypertrophy;
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                                                                                                                                                          (COMP-) COMPUGEN LTD.
                                                                                                                                                                                                                                                                                                                                                                         vascular disorder; asbestosis.
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                                                                           2001-336004/35.
DB; AASO6025.
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55; Conservative
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                                                                                                                         David A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        55 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        converting enzyme (ACEV) splice variant protein #25.
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99IL-0133455
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Pred. No. 1.7e-35;
; Mismatches 0;
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RESULT 3
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Matches
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                       WPI; 1997-350966/32.
N-PSDB; AAT72711.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               disorders including cardiovascular diseases such as arteriosclerosis, myocardial infarction and coronary arterial thrombosis, renal diseases such as diabetic nephropathy, muscular diseases such as hypertrophy, immune disorders such as immune complex nephritis, multiple sclerosis, cancer, sarcoidosis, nonarcoidotic pulmonary granulomatous diseases such as asbestosis and vascular pathologies involving an endothelial abnormality such as deep vein thrombosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The sequence represents an angiotensin converting enzyme splice variant (ACEV) polypeptide. The polypeptides of the invention include variants o granulocyte colony stimulating factor receptor, glucagon, interleukin 6, platelet-derived endothelial cell growth factor, cyclin-dependent kinase inhibitor 10, cellular tumour antigen P53, and vasoactive intestinal
                                                                                                                                                               03-JUL-1997
                                                                                                                                                                                                                                                                                                                                                                         cancer; therapy;
                                                                                                                                                                                                                                                                                                                                                                                       Inhibitor of apoptosis protein; IAP; mammalian IAP homologue; degenerative disease; infectious disease; autoimmune disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAW19746;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAW19746 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         polypeptide receptor 2. The polypeptides and their associated nucleic acids are useful for identification of variant sequences and detection candidate compounds capable of binding the molecules. The sequences of the invention can be used in the treatment and diagnosis of various
                                                                                     (AMRA-) AMRAD
                                                                                                               22-DEC-1995;
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                                                                                                                                                                                                                                                                                                                                                 Homo sapiens.
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l Similarity 100.0%;
55; Conservative (
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                                                                                      OPERATIONS PTY
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                                                                                                               95AU-0007275
                                                                                                                                       96WO-AU00827
                                                                                                                                                                                                                                                                                                           Location/Qualifiers
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269..337
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                                                                                                                                                                                                                                           /label= BIR
                                                                                                                                                                                                                                                                                                                                                                         diagnosis.
                                                                                                                                                                                                                   /label= RING_finger
                                                                                                                                                                                                                                                                                             /label- BIR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Protein; 618
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Pred. No. 1.3
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ss 0;
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Isolated protein homologues of viral inhibitors of

apoptosis -

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RESULT 4
AAW19583
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Best Local
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04-AUG-1995;
Nucleic acid encoding an inhibitor of apoptosis polypeptide - used to inhibit apoptosis in e.g. HIV or AIDS patients, and for detection
                                                                                                                                                                                                                                                                05-AUG-1996;
                                                                                                                                                                                                                                                                                                                                              W09706255-A2
                                                                                                                                                                                                                                                                                                                                                                                                            Domain
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reperfusion injury; toxin-induced liver disease; gene therapy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         02-SEP-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mammalian IAP homologue B (MITB) (AAW19746) is a human homologue of baculovirus inhibitor of apoptosis protein (IAP). Its amino acid sequence was deduced from a cDNA clone (see also AAT7271) isolated from a human foetal liver cDNA library using primers based on human EST sequences that resembled the BIR repeats of Orygia pseudotsuguta polyhedrosis virus IAP. IAP homologues (see also AAW19745 and AAW19747-52) and their derivatives and chemical analogues can be used in methods for modulating apoptosis in animal cells, specifically for treatment, by inhibition, of degenerative and infectious disease or, by promotion, of cancer and autoimmune
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim
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                                                                                                                       Korneluk RG,
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95US-0511485
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                                                                                                                                                                                                                                                                                                                                                                                                                           abel- BIR-3
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Pred. No. 3e-34;
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                                                                                                                       Mackenzie
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Best Local
The human cellular inhibitor of apoptosis proteins (c-IAPI/2-AAT61590/T61991) comprise a series of defined structural domain repeats and/or a RING finger domain; in particular, at least two of a first domain repeat (AAW13547 or AAW13548), a second domain repeat (AAW13549), and a third domain repeat (AAW1355), and a third domain repeat (AAW13551 or AAW13552) and/or a RING finger domain (AAW13553 or AAW13554), or a consensus seguences derived from these human genes.
                                                                                                                                                       Nucleic acids encoding cellular inhibitor of apoptosis proteins useful for apoptosis regulation in cells to reduce or increase apoptosis and for pharmacological screening
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              M-HIAP-2 (AAW19581-86) are a new class of mammalian proteins that are inhibitors of apoptosis (IAP) and which are characterised by the presence of a ring zinc finger domain (see also AAW19587) and at least one BIR (baculovirus IAP repeat) domain (see also AAW19588). The HIAP amino acid sequences were deduced from cDNA clones (AAT70837 and AAT70838) from a human liver library. In Polypeptides can be expressed in host cells (in vitro or in vivo) and used in methods for treating diseases and disorders involving apoptosis, esp. in a neurodegenerative disease, a myelodysplastic syndrome or an ischaemic injury, seleted from myocardial infarction, stroke, reperfusion injury, or a toxin-induced liver disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IAP; inhibitor; apoptosis; RING finger myocardial infarction; nephritis; HIV.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    of susceptibility to apoptotic disease
                                                                                                                           Disclosure; Page 18-20; 35pp; English.
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08-AUG-1995;
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95US-0512946
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Matches 55
apoptosis protein (IAP), and can be used in the method of the invention. The method is for enhancing apoptosis in cells from a mammal with proliferative disease by treatment with a compound that inhibits biological activity of an IAP or NAIP polypeptide. The inhibitory compounds are used to treat proliferative diseases, specially cancers of ovary, breast, pancreas, lymph nodes, skin, blood, lung, brain, kidney, liver nasopharnyx, thyroid,central nervous system, prostate, colon, rectum, cervix or endometrium, particularly to increase their sensitivity to chemotherapeutic agents. High levels of the IAP or NAIP proteins are resistance to chemotherapeutic agents and mutations in p53 (it is suggested that wild-type p53 suppresses transcription of the TAP or NAIP genes). Transgent animals are used for testing the effects of antisense oligonucleotides and for screening for the inhibitors.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The nucleic acid is used for recombinant produ. of human cellular inhibitor of apoptosis protein which modulates apoptosis regulation. The nucleic acids are useful in therapies where increased cell-specific apoptosis is desired, e.g. in restinosis, inflammatory disease states, myocardial infarction, glomerular nephritis, transplant rejection and infectious diseases, e.g. HIV They can also be used in conditions requiring a reduction in
                                                                                                                                                                                                                                                                                   Inducing apoptosis in proliferative mammalian cells with inhibitor of IAP or NAIP polypeptide - also methods for prognosis based on presence of IAP and NAIP, specifically applied to cancers involving
                                                                                                                                                                                                              This sequence is the human HTAP-2 protein, which is a inhibitor of
                                                                                                                                                                                                                                            Disclosure; Fig
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IAP; therapy; cancer; human; HIAP-2 protein.
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No. 3e-34;
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                                                                                                                                                                                               therapeutics (for modulating the expression of c-TAP-1), prophylaxis (e.g. to prevent or delay infection, inflammation, or tumor formation), as research reagents (e.g. to distinguish between members of a biological pathway) and in kits. The present sequence represents the human ceilular inhibitor of apoptosis-1.
                                                                                                                                                                                                                                             The invention provides antisense compounds of 8-30 nucleotides the inhibit the expression of human Cellular Inhibitor of Apoptosis-1 (C-IAP-1). The antisense compounds may be used for diagnostics therapeutics (for modulating the expression of c-IAP-1), prophyla:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cellular Inhibitor of c~IAP-1; prophylaxis;
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RESULT 9
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                                                                                                                                                                                                                                                                                                                                                                                                                                      The invention relates to an inhibitor of apoptosis (IAP) antisense nucleic acid (I) that inhibits IAP biological activity, regardless of length of the antisense nucleic acid, the IAP proteins may be mouse or human XIAP, HIAP1 or HIAP2. Also included are a pharmaceutical composition comprising a mammalian IAP antisense molecule and a method enhancing apoptosis in a cell, comprising administering a negative regulator of the IAP anti-apoptotic pathway to the cell. The IAP antisense inhibitor is useful for enhancing apoptosis in a cell in a mammal diagnosed with a proliferative disease. The method is useful for treating a patient diagnosed with a proliferative disease. The method is useful for the IAP antisense molecule is useful to treat, ameliorate, improve, sustain or prevent proliferative diseases (e.g. overlan cancer, and according to the property and according to the provent provent provided the provent provent provents approved to treat, ameliorate, improve, and according to the provents are treated to the provents and the provents are treated to the provents and the provents are treated to the provents are treated to the provents and the provents are treated to the provents are treated to the provents are treated to the provents are treated to the provents are treated to the provents are treated to the provents are treated to the provents are treated to the provents are treated to the provents are treated to the provents are treated to the provents are treated to the provents are treated to the provents are treated to the provents are treated to the provents are treated to the provents are treated to the provents are treated to the provents are treated to the provents are treated to the provents are treated to the provents are treated to the provents are treated to the provents are treated to the provents are treated to the provents are treated to the provents are treated to the provents are treated to the provents are treated to the provents are treated to the provents are treated to the provents are treat
                                                                                                                                                                                                                                                                                                                                                        adenocarcinoma, lymphoma, pancreatic cancer,) and also in diseases or conditions where apoptosis is involved or implicated (e.g. embryonic development, viral pathogenesis, autoimmune disorders, neurodegenerative diseases, multiple sclerosis, lupus erythematosus and infection by herpes virus, pox virus and adenovirus). The present sequence is a human IAP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Novel antisense inhibitor of apoptosis nucleic acid useful for enhancing apoptosis in a cell, for treating cancer and other proliferative diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cytostatic; cancer; ovarian cancer; adenocarcinoma; lymphoma; IAP; pancreatic cancer; embryonic development; viral pathogenesis; autoimmune disorder; neurodegenerative disease; multiple sclerosis; lupus erythematosus; herpes virus infection; pox virus infection; adenovirus infection; proliferative disease.
                 22-JUL-1997
                                                   AAW13548;
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RESULT 10
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Critic third finger domain (AAW1353 or AAW13554), or a consensus sequences derived from these human genes.

Critic fine nucleic acid is used for recombinant prodn. of human cellular regulation. The nucleic acids are useful in therapies where increased cell-specific apoptosis is desired, e.g. in restinosis, inflammatory disease states, myocardial infarction, glomerular nephritis, transplant rejection and infectious diseases, e.g. HIV.
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Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                   Inhibitor of apoptosis protein; IAP; mammalian IAP homologue; degenerative disease; infectious disease; autoimmune disease; cancer; therapy; diagnosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nucleic acids encoding cellular inhibitor of apoptosis proceins useful for apoptosis regulation in cells to reduce or increase apoptosis and for pharmacological screening
                                                                                                                                                                                                                 Human
                                                                                                                                                                                                                                                              16-SEP-1997
                                                                                                                                                                                                                                                                                                                                                           AAW19747 standard; Protein; 604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  08-DEC-1995;
08-AUG-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IAP; inhibitor; apoptosis; RING finger domain; myocardial infarction; nephritis; HIV.
                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                               AAW19747;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                apoptosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 1997-154209/14.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Goeddel DV,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (TULA-) TULARIK INC.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20-FEB-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    W09706182-A1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKLGDSP 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKRGDSP 55
                                                                                                                                                                                                                 inhibitor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3; Page 24; 35pp; English
                                                                                                                 therapy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Rothe M;
                                                                                                                                                                                                                                                              (first entry)
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95US-0512946.
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Location/Qualifiers
29..97
                                                                                                                                                                                                               apoptosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 98.0%;
98.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              . 28;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u>;</u>
                                                                                                                                                                                                               protein
                                                                                                                                                                                                                                                                                                                                                           B
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No. 1.
                                                                                                                                                                                                               homologue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 18;
.2e-34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      restinosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 55
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     or AAW13552)
                                                                                                                                                                     MIHC
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Key Region

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RESULT 11
AAW19582
ID AAW19582
XX AW19
XX AW19
XX U2-SE
XX U2-SE
XX Human
XX Apopt
KW Apopt
KW Apopt
KW Apopt
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                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mammalian IAP homologue C (MIHC) (AAW19747) is a human homologue of baculovirus inhibitor of apoptosis protein (IAP). Its amino acid sequence was deduced from a charloscopic (see also AAT72712) isolated from a human foetal liver cDNA library using orimers based on human EST sequences that resembled the BIR repeats of Orygia pseudotsuguta polyhedrosis virus IAP. IAP homologues (see also AAW19745-46 and AAW19748-52) and their derivatives and chemical analogues can be used in methods for modulating apoptosis in animal cells, specifically for treatment, by inhibition, of degenerative
                                                                                                      Apoptosis inhibitor; HIAP myelodysplastic syndrome; reperfusion injury; toxin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Isolated protein homologues of viral inhibitors of apoptosis - of modulate apoptosis for treatment of degenerative, infectious autoimmune diseases and cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 1997-350966/32.
N-PSDB; AAT72712.
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 Domain
                                                                                                                                                            Human apoptosis inhibitor HIAP-1.
                                                                                                                                                                                        02-SEP-1997
                                                                                                                                                                                                                                            AAW19582 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 9; Page 58-62; 136pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20-DEC-1996;
                          Domain
                                                                                                                                                                                                                   AAW19582;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          22-DEC-1995;
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                                                                Homo sapiens
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                                                                                                                                                                                                                                                                                                                                                                                 Local
                                                                                                                                                                                                                                                                                                                           1 CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKLGDSP 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                infectious disease or,
                                                                                                                                                                                                                                                                                                             CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKRGDSP 82
                                                                                                                                                                                                                                                                                                                                                                   l Similarity
54; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                        604
                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OPERATIONS PTY
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                       Location/Qualifiers 29,.96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /label=
556..593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /label
255..3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /label=
169..236
            /label- BIR-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /label= RING_finger
                                                                                                                                                                                                                                            Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BIR
.323
                                                                                                      lrome; ischaemia; myocardial
toxin-induced liver disease;
                                                                                                                                HIAP-1; HIV; AIDS; neurodegeneration;
                                                                                                                                                                                                                                                                                                                                                                             98.0%;
98.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BIR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BIR
                                                                                                                                                                                                                                                                                                                                                                                                                                                             by promotion,
                                                                                                                                                                                                                                            604
                                                                                                                                                                                                                                                                                                                                                               Score 301; DB 1
Pred. No. 2e-33;
0; Mismatches
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                                                                                                                                                                                                                                            A
                                                                                                                                                                                                                                                                                                                                                                                           DB 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               of cancer and
                                                                                                                                                                                                                                                                                                                                                                 1;
                                                                                                                      infarction; stroke;
                                                                                                      gene therapy;
                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                               autoimmune
                                                                                                                                                                                                                                                                                                                                                                                            604;
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RESULT 12
AAW13546
ID AAW13
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                                                                                                                                                                                                                                                                                                                                                                                               Human XIAP, HIAP-1 and HIAP-2 and murine M-XIAP, M-HIAP-1 and M-HIAP-2 (AAM19581-86) are a new class of mammalian proteins that are inhibitors of apoptosis (IAP) and which are characterised by the presence of a ring zinc finger domain (see also AAM19587) and at least one BIR (baculovirus IAP repeat) domain (see also AAM19588). The HIAP amino acid sequences were deduced from CDNA clones (AAT70837 and AAT70838) from a human liver library. IAP polypeptides can be expressed in host cells (in vitro or in vivo) and used in methods for treating diseases and disorders involving apoptosis, esp. in a neurodegenerative disease, a myelodysplastic syndrome or an ischaemic injury, seleted from myocardial infarction, stroke, reperfusion injury, or a toxin-induced liver disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Nucleic acid encoding an inhibitor of apoptosis polypeptide - used to inhibit apoptosis in e.g. HIV or AIDS patients, and for detection of susceptibility to apoptotic disease
                                                                                               IAP; inhibitor; apoptosis; RING finger domain; myocardial infarction; nephritis; HIV.
                                                                       Homo sapiens
                                                                                                                                     Human
                                                                                                                                                            22-JUL-1997
                                                                                                                                                                                     AAW13546;
                                                                                                                                                                                                            AAW13546 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 27; Page 72-74; 219pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N-PSDB; AAT70837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Baird
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         22-DEC-1995;
04-AUG-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               05-AUG-1996;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (UYOT-) UNIV OTTAWA.
                                                                                                                                                                                                                                                                          28 CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKFGDSP
                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                                                                                                                                                                                                       1 CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKLGDSP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1997-154262/14.
                                                                                                                                   c-IAP2
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                                                                                                                                                                                                                                                                                                                                       Similarity
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                                                                                                                                                                                                                                                                                                                                                                            604 AA;
                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                            (first entry)
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95US-0511485
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546..591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /label- BIR-2
255..322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /label- Ring_zinc_finger
                                                                                                                                                                                                                                                                                                                                    98.0%;
98.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Liston
                                                                                                                                                                                                              604
                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                          Score 301; DB 1
Pred. No. 2e-33;
0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                   DB 18;
                                                                                                                                                                                                                                                                                                                           1,
                                                                                                             restinosis;
                                                                                                                                                                                                                                                                                                                                                   Length 604:
                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                           82
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06-AUG-1996; 20-FEB-1997.

96WO-US12860

N-PSDB; AAV55039

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RESULT 13
AAW69295
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                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sequences derived from these human genes.

The nucleic acid is used for recombinant prodn. of human cellular inhibitor of apoptosis protein which modulates apoptosis regulation. The nucleic acids are useful in theraples where increased cell-specific apoptosis is desired, e.g. in restinosis, inflammatory disease states, myocardial infarction, glomerular nephritis, transplant rejection and infectious diseases, e.g. HIV.

They can also be used in conditions requiring a reduction in
                       Baird S,
Tsang B;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAT61590/T61591) comprise a series of defined structural domain repeats and/or a RING finger domain; in particular, at least two of a first domain repeat (AAW13547 or AAW13548), a second domain repeat (AAW13550), and a third domain repeat (AAW13551 or AAW13552) and/or a RING finger domain (AAW13553 or AAW13554), or a consensus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Nucleic acids encoding cellular inhibitor of apoptosis proteins useful for apoptosis regulation in cells to reduce or increase apoptosis and for pharmacological screening
WPI; 1998-467164/40
                                                                                                                                                                                                                                                                                                                         AAW69295 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The human cellular inhibitor of apoptosis proteins (c-TAP1/2 AAT61590/T61591) comprise a series of defined structural domains.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Disclosure; Page 21-23; 35pp;
                                                                                    13-FEB-1997;
                                                                                                             13-FEB-1998;
                                                                                                                                      20-AUG-1998
                                                                                                                                                             WO9835693-A2
                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                             proliferative
                                                                                                                                                                                                                         Inhibitor of apoptosis
                                                                                                                                                                                                                                                  Human HIAP-1
                                                                                                                                                                                                                                                                          13-NOV-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              08-DEC-1995;
08-AUG-1995;
                                                             (UYOT-) UNIV OTTAWA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (TULA-) TULARIK INC.
                                                                                                                                                                                                                                                                                                                                                                                         28
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                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                   Korneluk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        604 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                  protein
                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Rothe M;
                                                                                                                                                                                                             disease;
                                                                                    97US-0800929
                                                                                                             98WO-IB00781
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95US-0512946.
                                    æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                98.0%;
98.2%;
                                                                                                                                                                                                           protein; apoptosis enhancer;
IAP; therapy; cancer; human;
                                    Liston
                                                                                                                                                                                                                                                                                                                           604
                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 301; DB 1
Pred. No. 2e-33;
D; Mismatches
                                   ۵,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                English.
                                                                                                                                                                                                                                                                                                                           AA
                                    Mackenzie
                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 16;
                                    Æ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 604;
                                    Pratt
                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                           NAIP polypeptide;
HIAP-1 protein.
                                   ç;
                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
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SXCCCCCCCCCCCXXXXTTTTXXX
                                       compounds are used to treat proliferative diseases, specially cancers of ovary, breast, pancreas, lymph nodes, skin, blood, lung, brain, kidney, liver nasopharnyx, thyroid, central nervous system, prostate, colon, rectum, cervix or endometrium, particularly to increase their sensitivity to chemotherapeutic agents. High levels of the IAP or NAIP proteins are detected in many cancers and are associated with poor prognosis, resistance to chemotherapeutic agents and mutations in p53 (it is suggested that wild-type p53 suppresses transcription or the IAP or NAIP genes). Transgenic animals are used for testing the effects of antisense oligonucleotides and for screening for the inhibitors.
                                                                                                                                                                                                                                                                                                apoptosis protein (IAP), and can be used in the method of the invertee the method is for enhancing apoptosis in cells from a mammal with proliferative disease by treatment with a compound that inhibits biological activity of an IAP or NAIP polypeptide. The inhibitory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Inducing apoptosis in proliferative mammalian cells with inhibitor of IAP or NAIP polypeptide - also methods for prognosis based on presence of IAP and NAIP, specifically applied to cancers involving p53 mutations
                                                                                                                                                                                                                                                                                                                                                                                                          This sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Disclosure; Fig 2; 147pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                          is the human
                                                                                                                                                                                                                                                                                                                                                                                                          HIAP-1
                                                                                                                                                                                                                                                                                                                                                                                                  protein,
                                                                                                                                                                                                                                                                                                                                                                             which is a inhibitor of n the method of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cancers involving
                                                                                                                                                                                                   their sensitivity
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Query Match
Best Local S
Matches 54
28 CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKRGDSP
                           1 CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKLGDSP 55
                                                                  Similarity
                                                      Conservative
                                                                  98.0%;
98.2%;
                                                      0;
                                                   Score 301; DB 1
Pred. No. 2e-33;
0; Mismatches
                                                                               19;
                                                                             Length 604;
                                                     0;
  82
                                                     Gaps
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0

밁 Š

Sequence

604 AA;

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AAY52703
                                                                                                                                                                                                                                                                                     RESULT 14
                                                                                                                                                                                      Identification; genetic target; gene modulation; human; antisense oligonucleotide; phosphorothioate; target validation; nucleotide sequence-based technology; antisense drug discovery.
                                                                                                                                                                                                                                      26-JAN-2000
                                                                                                                                          21-OCT-1999
                                                                                                                                                         WO9953101-A1
                                                                                                                                                                         Homo
                                                                                                                                                                                                                       Human cellular inhibitor of apoptosis-2
                                                                                                                                                                                                                                                      AAY52703;
                                                                                                                                                                                                                                                                      AAY52703 standard; Protein; 604 AA.
                                                                                                                                                                         sapiens
                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                       protein
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Cowsert I Ohasi C,

LM, Baker , Wyatt JR,

BF,

Borchers McNeil J, rchers AH,

Freier SM, Vickers TA;

Sasmor

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Brooks

g B

(ISIS-)

SISI

PHARM INC

13-APR-1998; 28-APR-1998;

98US-0081483. 98US-0067638. 99WO-US08268

13-APR-1999;

WPI; 1999-620446/53. N-PSDB; AAZ41005.

Identifying compounds which modulate expression of nucleic to provide compounds having defined physical, chemical or properties, e.g. antisense activity

c acids, us bioactive

used

Example

20; Page 197-202; 264pp; English

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RESULT 15
AAY33997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CC A method has been developed of defining a set of compounds that modulate Ct the expression of a target nucleic acid (tNA) sequence via binding of CC the compounds with the tNA sequence. The method comprises generating a CC library of virtual compounds in silico according to defined criteria. CC and evaluating in silico the binding of the virtual compounds with the CC tNA according to defined criteria. Also described are: (1) a method of CC defining a set of oligonucleotides (ONs) that modulate the expression of CC atNA sequence via binding of the ONs with the tNA sequence comprising CC generating a library of virtual compounds in silico according to defined CC riteria, and evaluating in silico the binding of the virtual ONs with the tNA according to defined CC riteria, and compounds that modulate the expression of a tNA sequence via compounds that modulate the expression of a tNA sequence via compounds with the tNA. The methods can be used for the CC binding of the compounds with the tNA. The methods can be used for the CC physical, chemical or bioactive properties. Information gathered: from CC assays of such compounds is used to identify nucleic acid sequences that care tractable to a variety of nucleotide sequence based technologies. CC e.g. antisense drug discovery and target validation. AAX40852 to CC AAX41220, and AAY52701 to AAY52706, represent sequences used in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
The invention provides antisense compounds of 8-30 nucleotides that inhibit the expression of human Cellular Inhibitor of Apoptosis-2 (C-IAP-2). The antisense compounds may be used for diagnostics, therapeutics (for modulating the expression of c-IAP-2), prophylaxis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cellular Inhibitor of Apoptosis-2; antisense; diagnostic; ther c-IAP-2; prophylaxis; infection; inflammation; tumor formation.
                                                                                                                      Antisense compounds complementary to Cellular Inhibitor of Apoptosis-2 useful for e.g. diagnostics, therapeutics, and as research reagents -
                                                                                                                                                                            WPI; 1999-561046/47.
N-PSDB; AAZ22096.
                                                                                                                                                                                                                                                                                                                                        03-DEC-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAY33997;
                                                                                         Example
                                                                                                                                                                                                                                                                                                      03:DEC-1998;
                                                                                                                                                                                                                                                                                                                                                                         28-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                            US5958771-A
                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human cellular inhibitor of apoptosis-2 sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAY33997 standard; Protein; 604 AA
                                                                                                                                                                                                                                Bennett CF,
                                                                                                                                                                                                                                                                   (ISIS-) ISIS PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        26-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             13; Columns 45-50; 33pp;
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                                                                                                                                                                                                                                Cowsert LM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
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Pred. No. 2e-33;
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                                                                                       English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            diagnostic; therapeutic;
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SSSSSSS (e.g. to prevent or delay infection, inflammation, or tumor formation), as research reagents (e.g. to distinguish between members of a biological pathway) and in kits. The present sequence represents the human cellular inhibitor of apoptosis-2.

Sequence 604 AA;

Query Match Best Local : Matches Local 54; Similarity Conservative 98.0%; 0 Score 301; DB 20 Pred. No. 2e-33; Mismatches DB 20; Length 604; Indels 0; Gaps

82 55

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Search completed: May 5, Job time: 11.8353 secs 2003, 16:01:58

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Result
No.
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Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Minimum DB seq length: 0
Maximum DB seq length: 200000000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence:
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Perfect score:
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                                                                                                                                                                                                                                                                                                                                                                                  score
                                                                                                                                                                                                                                                                                                                                                                      and is derived
                                                                                                                                                                                                                                                                                                                                                                                                   Pred. No.
                                                                                                                                                                                                                                                                                                Score
   111111122222233333
                                                                                                                                                                                                                                                                                                                                                                   No. is the number of results predicted by chance to have a greater than or equal to the score of the result being printed, s derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         protein search, using sw model
                                                                                                                                                                                                                                                                                              Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-569-749-5
307
1 CELYRMSTYSTEPAGYPVSE......KVKCFCCGLMLDNWKLGDSP 55
               BLOSUM62
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                                                                                                                                                                                                                                                                                                                                                                                                                         : /cgn2_6/ptodata/2/pubpaa/US07_PUBCOMB.pep:*
:/cgn2_6/ptodata/2/pubpaa/US08_PUBCOMB.pep:*
:/cgn2_6/ptodata/2/pubpaa/US08_PUBCOMB.pep:*
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:/cgn2_6/ptodata/2/pubpaa/US10_NEW_PUB.pep:*
:/cgn2_6/ptodata/2/pubpaa/US10_NEW_PUB.pep:*
:/cgn2_6/ptodata/2/pubpaa/US10_NEW_PUB.pep:*
:/cgn2_6/ptodata/2/pubpaa/US10_NEW_PUB.pep:*
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GenCore version 5.1.4_p5_4578 Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /cgn2_6/ptodata/2/pubpaa/US06_NEW_PUB.pep:*
/cgn2_6/ptodata/2/pubpaa/US06_PUBCOMB.pep:*
/cgn2_6/ptodata/2/pubpaa/US07_NEW_PUB.pep:*
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/cgn2_6/ptodata/2/pubpaa/PCT_NEW_PUB.pep:*
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          US-09-201-936-6
US-09-201-936-18
US-09-201-936-18
US-09-201-936-18
US-09-201-936-40
US-09-201-936-40
US-09-201-936-40
US-09-201-936-40
US-09-201-936-40
US-09-201-936-40
US-09-201-936-17
US-09-201-936-4
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US-09-974-592-8
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                                                                                                                                                                                                                                                                 US-09-778-927A-62
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                        Sequence 62, Appli
Sequence 8, Appli
Sequence 6, Appli
Sequence 6, Appli
Sequence 19, Appl
Sequence 19, Appl
Sequence 14, Appl
Sequence 12, Appl
Sequence 17, Appl
Sequence 17, Appl
Sequence 20, Appl
Sequence 21, Appl
Sequence 22, Appl
Sequence 4, Appli
Sequence 4, Appli
Sequence 4, Appli
Sequence 16, Appl
Sequence 16, Appli
Sequence 16, Appli
Sequence 11, Appli
Sequence 11, Appli
Sequence 12, Appli
Sequence 13, Appli
Sequence 14, Appli
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             Sequence 1
Sequence 1
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Sequence
               10,
Appli
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	106	107	107	108.5	111	111	111	111	114.5	115	115	115	120.5	125	125	127	127	127	128	130	132	132	132	133	138	139	
	•	•				36.2											•	•	•	•	43.0	•	•	•	•	•	
	83	172	89	109	278	107	66	66	67	346	172	68	67	1403	1403	172	109	68	68	83	172	68	68	89	68	110	
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ALIGNMENTS	US-10-041-859-15	US-10-041-859-10	-10-041-859	-09-965-967	-09-964-899		US-09-201-936-25	9-201-936	-09-201-936	-10-041-859	-10-041-859	-10-041-859	-09-201-936	-08-913-322	-08-913-322	-10-041-859	-09	-10-041-859	-09-201-936	01-936	-10-041-859	-10-041-859	-09-201-936	-936	-09-201-936	-967	
		10,	16,	19,	39,	20,	25,	24,	23	2	8	14,	22,	24,	22	13,	30,	19,	20,	21	12	18	e 28,	26,	27,		

IGNMENT

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RESULT 2
US-09-201-936-8
                                                                                                                                                                                                                                                                                                                                 ; FEATURE:
NAME/KEY: misc_feature
LOCATION: (1)..(306)
OTHER INFORMATION: Xaa = any amino acid, unknown, or other
US-09-778-927A-62
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                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQ ID NO 62
LENGTH: 306
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
APPLICANT: KHOSRAVI, Rami et al.
TITLE OF INVENTION: NOVEL NUCLEIC ACID AND AMINO ACID SEQUENCES AND I
TITLE OF INVENTION: VARIANTS OF ALTERNATIVE SPLICING
FILE REFERENCE: 2786-0160P
CURRENT APPLICATION NUMBER: US/09/778,927A
CURRENT FILING DATE: 2001-02-08
PRIOR APPLICATION NUMBER: IL 134453
PRIOR APPLICATION NUMBER: IL 135341
PRIOR FILING DATE: 2000-03-29
PRIOR FILING DATE: 2000-03-29
NUMBER OF SEQ ID NOS: 81
SOUTWARE: Patentin Ver. 2.1
Sequence 8, Application US/09201936
Publication No. US20020187946A1
GENERAL INFORMATION:
APPLICANT: Korneluk, Robert G.
                                                                                                                                                                                                                                                Query Match
Best Local S
Matches 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 62, Application US/09778927A Patent No. US20020068342A1
                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM: Homo sapiens
                                                                                                                                                                 Match 100.0%; Local Similarity 100.0%; les 55; Conservative 0;
                                                                                                                                                                                                                                              Score 307; DB 10;
Pred. No. 2.8e-33;
; Mismatches 0;
                                                                                                                                                                                                                                                                                            Length 306;
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                                                                                                                                                                                                                                                     0;
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MacKenzie, Alexander E

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RESULT 4
US-09-201-936-6
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; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-974-592-8
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CURRENT FILING DATE: 1998-12-01
EARLIER APPLICATION NUMBER: 09/011,356
EARLIER FILING DATE: 1998-02-04
EARLIER APPLICATION NUMBER: 07/IB96/01022
EARLIER APPLICATION NUMBER: 08/576,956
EARLIER APPLICATION NUMBER: 08/576,956
EARLIER APPLICATION NUMBER: 08/576,956
EARLIER FILING DATE: 1995-12-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQ ID NO 8
LENGTH: 618
TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                  SEQ ID NO 8
LENGTH: 618
                                                                                                                                                             Matches
                                                                                                                                                                                               Query Match
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                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: DETECTION AND MODULATION OF IAPS AND TITLE OF INVENTION: NAIP FOR THE DIAGNOSIS AND TREATMENT OF PROLIFERATIVE TITLE OF INVENTION: DISEASE FILE REFERENCE: 07891/00904 CURRENT APPLICATION NUMBER: US/09/974,592 CURRENT FILING DATE: 2001-10-09 PRIOR APPLICATION NUMBER: US 09/617,053 PRIOR APPLICATION NUMBER: US 09/617,053 PRIOR FILING DATE: 2000-07-14 PRIOR FILING DATE: 2000-07-14 PRIOR FILING DATE: 1997-02-13 NUMBER OF SED ID NOS: 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 8, Application US/09974592
Patent No. US20020120121A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Korneluk, Robert G APPLICANT: MacKenzie, Alexand
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EARLIER APPLICATION NUMBER: 08/511,485
EARLIER FILING DATE: 1995-08-04
NUMBER OF SEQ ID NOS: 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Tsang, Benjamin i
APPLICANT: Pratt, Christine
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: MAMMALIAN IAP GENE FAMILY, PRIMERS, TITLE OF INVENTION: PROBES, AND DETECTION METHODS FILE REFERENCE: 07891/003003
                                                                                                                                                                                                                                                                                                                                            SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: FastSEQ for Windows Version 3.0
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                                                                             CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKLGDSP 99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INFORMATION
                                                                                                                                                         h 100.0%;
Similarity 100.0%;
55; Conservative 0;
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Liston, Peter
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Pred. No. 6.2e-33;
Pred. No. 6.2e-33;
                                                                                                                                                       Score 307; DB 10;
Pred. No. 6.2e-33;
Mismatches ();
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; SEQ ID NO 6
; LENGTH: 604
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-974-592-6
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LENGTH: 604
                                                                                                          Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Pratt, Christine
TITLE OF INVENTION: DETECTION AND MODULATION OF
TITLE OF INVENTION: NAIP FOR THE DIAGNOSIS AND
TITLE OF INVENTION: DISEASE
                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION NUMBER: US/09/974,592
CURRENT FILING DATE: 2001-10-09
PRIOR APPLICATION NUMBER: US 09/617,053
PRIOR FILING DATE: 2000-07-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION: MAMMALIAN IAP GENE FAMILY, PRIMERS TITLE OF INVENTION: PROBES, AND DETECTION METHODS FILE REFERENCE: 07891/003003
                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: US 08/800,929 PRIOR FILING DATE: 1997-02-13 NUMBER OF SEQ ID NOS: 17 SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION: DISEASE FILE REFERENCE: 07891/009004
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EARLIER APPLICATION NUMBER: 08/511,485
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EARLIER FILING DATE: 1998-02-04
EARLIER APPLICATION NUMBER: PCT/IB96/01022
EARLIER FILING DATE: 1996-08-05
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Baird, Stephen APPLICANT: Liston, Peter
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APPLICANT: MacKenzie, Alexan
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                                                                                        Local
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               CELYRMSTYSTEPAGVPVSERSLARAGEYYTGVNDKVKCFCCGLMLDNWKLGDSP 55
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5. US20020120121A1
                                                                       1 Similarity 98.
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Pratt, Christine
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                                                                       Score 301; DB 10;
Pred. No. 3.9e-32;
0; Mismatches 1;
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Application US/09201936

ENERAL INFORMATION:

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                                                                                                SEQ ID NO 18
LENGTH: 68
TYPE: PRT
Query Match
Best Local Similarity
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LENGTH: 68
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                                                                                                                                                                                           EARLIER APPLICATION NUMBER: 08/511,485 EARLIER FILING DATE: 1995-08-04
                                                                                                                                                                                                                                                                                         CURRENT APPLICATION NUMBER: US/09/201,936
CURRENT FILING DATE: 1998-12-01
EARLIER APPLICATION NUMBER: 09/011,356
EARLIER FILING DATE: 1998-02-04
EARLIER APPLICATION NUMBER: PCT/IB96/01022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: MacKenzie, Alexander E. APPLICANT: Baird, Stephen
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EARLIER FILING DATE: 1998-02-04
EARLIER APPLICATION NUMBER: PCT/IB96/01022
EARLIER FILING DATE: 1996-08-05
EARLIER APPLICATION NUMBER: 08/576,956
EARLIER FILING DATE: 1995-12-22
EARLIER APPLICATION NUMBER: 08/511,485
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                                                                                                                                                                                                                                                                                                                                                                                                  FILE REFERENCE: 07891/003003
                                                                                                                                                                                                                                                                                                                                                                                                                   ITLE OF INVENTION: MAMMALIAN IAP GENE FAMILY, PRIMERS, ITLE OF INVENTION: PROBES, AND DETECTION METHOD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ILE REFERENCE: 07891/003003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TLE OF INVENTION: MAMMALIAN IAP GENE FAMILY,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local
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                                                                                                                                                                                                                                  APPLICATION NUMBER: 08/576,956 FILING DATE: 1995-12-22
                                                                                                                                                                                                                                                                           FILING DATE: 1996-08-05
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Baird, Stephen
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  95.1%;
98.1%;
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Pred. No.
  Score 292;
Pred. No. !
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  2; DB 9;
. 5.2e-32;
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              SOFTWARE: Fas
SEQ ID NO 14
LENGTH: 612
TYPE: PRT
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LENGTH: 591
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                                                                                                                                                                                                                                                                                                                                                                                                         Patent No.
                                                                                                                                    PRIOR APPLICATION NUMBER: US 09/617,053 PRIOR FILING DATE: 2000-07-14
                                                                                                                                                                       CURRENT APPLICATION NUMBER: US/09/974,592
                                                                                                                                                                                                                          TITLE OF INVENTION: DETECTION AND MODULATION OF IAPS AND TREATMENT OF PROLIFERATIVE TITLE OF INVENTION: DISEASE
                                                                                                                  PRIOR APPLICATION NUMBER: US 08/800,929
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE: FastSEQ
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION: MAMMALIAN TAP GENE FAMILY, PR
                                                                                                                                                                                                                                                                                                PPLICANT:
ORGANISM: Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            24 CELYRMSTYSAFPRGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKQGDSP 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKLGDSP 55
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US20020120121A1
                                                                  FastSEQ
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Pratt, Christine
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                                                                  for Windows Version 4.0
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                                                                                                   1997-02-13
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                                                                                                                                                                                                                                                                                                                                                                      Robert G
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Pred. No. 8.3e-31;
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US-09-974-592-14

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TITLE OF INVENTION: MAMMALIAN IAP GENE FAMILY, PRIMERS,
TITLE OF INVENTION: PROBES, AND DETECTION METHODS:
FILE REFERENCE: 07891/003003
CURRENT APPLICATION NUMBER: U$/09/201,936
CURRENT FILING DATE: 1998-12-01
EARLIER APPLICATION NUMBER: 09/011,356
EARLIER APPLICATION NUMBER: 09/011,356
EARLIER APPLICATION NUMBER: PCT/IB96/01022
EARLIER APPLICATION NUMBER: PCT/IB96/01022
EARLIER FILING DATE: 1996-08-05
EARLIER FILING DATE: 1995-12-22
EARLIER FILING DATE: 1995-12-22
EARLIER APPLICATION NUMBER: 08/576,956
EARLIER APPLICATION NUMBER: 08/576,956
EARLIER FILING DATE: 1995-08-04
EARLIER FILING DATE: 1995-08-04
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US-09-201-936-40
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US-09-974-592-12
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LENGTH: 60
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Best Local Similarity
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SOFTWARE: FastSEQ for Windows Version 4.0
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CURRENT APPLICATION NUMBER: US/09/974,592
CURRENT FILING DATE: 2001-10-09
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SOFTWARE: FastSEQ for Windows Version 3.0
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PRIOR FILING DATE: 2000-07-14
PRIOR APPLICATION NUMBER: US 08/800,929
PRIOR FILING DATE: 1997-02-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Korneluk, Robert G
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Similarity 90.9%;
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Pratt, Christine
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Pred. No. 7
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Pred. No. 8.7e-31;
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LENGTH:
                                                                                                                                                                                                                                                               sequence 22, Application US/09965967 Patent No. US20020177557A1 GENERAL INFORMATION:
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SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 17
LENGTH: 68
TYPE: PRT
ORGANISM: Homo sapiens
              SOFTWARE: PatentIn version 3.1
SEQ ID NO 22
LENGTH: 110
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Best Local 9
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Best Local (
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                                                                                                       PRIOR APPLICATION NUMBER: 60/236,574
PRIOR FILING DATE: 2000-09-29
PRIOR APPLICATION NUMBER: 60/256,830
                                                                                                                                                                  TITLE OF INVENTION: Compositions and Methods For Regulating Apoptosis FILE REFERENCE: PU-0031 (01-179-1) CURRENT APPLICATION NUMBER: US/09/965,967
CURRENT FILING DATE: 2001-09-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EARLIER APPLICATION NUMBER: 09/011,356
EARLIER FILING DATE: 1998-02-04
EARLIER APPLICATION NUMBER: PCT/IB96/01022
EARLIER FILING DATE: 1996-08-05
EARLIER APPLICATION NUMBER: 08/576,956
EARLIER FILING DATE: 1995-12-22
EARLIER FILING DATE: 1995-12-22
                                                                      NUMBER OF SEQ
                                                                                           PRIOR FILING DATE:
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                                                                                                                                                                                                                                             APPLICANT: Shi, Yigong
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Pred. No. 3.8e-14;
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Pred. No. 7
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7.4e-30;
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US-09-974-592-4
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US-09-201-936-4
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Best Local Sim
Matches 28;
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LENGTH: 49
TYPE: PRT
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                                                                                                                                                                                                                                                                                                                                                    sequence 4, Application US/09974592
                                                                       TITLE OF INVENTION: DETECTION AND MODULATION TITLE OF INVENTION: NAIP FOR THE DIAGNOSIS A TITLE OF INVENTION: DISEASE FILE REFERENCE: 07891/09904 CURRENT APPLICATION NUMBER: US/09/974,592 CURRENT FILING DATE: 2001-10-09
                                                                                                                                                                                            APPLICANT:
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PRIOR APPLICATION NUMBER: US 09/617,053
PRIOR FILING DATE: 2000-07-14
PRIOR APPLICATION NUMBER: US 08/800,929
PRIOR FILING DATE: 1997-02-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQ ID N
SOFTWARE: FastSEQ
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CURRENT FILING DATE: 1998-12-01
EARLIER APPLICATION NUMBER: 09/011,356
EARLIER FILING DATE: 1998-02-04
EARLIER APPLICATION NUMBER: PCT/1B96/0102:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Korneluk, Robert G. APPLICANT: MacKenzie, Alexander E.
                                                                                                                                                                                                                                                                                                                   ENERAL
                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Baird, Stephen APPLICANT: Liston, Peter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EARLIER APPLICATION NUMBER: 08/511,485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    'ILE REFERENCE: 07891/003003
                                                                                                                                                                                                                                                                                               PPLICANT: Korneluk, Robert G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ITLE OF INVENTION: MAMMALIAN IAP GENE FAMILY, PRIMERS, ITLE OF INVENTION: PROBES, AND DETECTION METHODS
                                                                                                                                                                                                                                                          PPLICANT:
                                                                                                                                                                                                                                                                                                                                      tent No.
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ARLIER APPLICATION NUMBER: 08/576,956
ARLIER FILING DATE: 1995-12-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Match 51.8%;
Local Similarity 52.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    26 EFNRLKTFANFPSGSPVSASTLARAGFLYTGEGDTVRCFSCHAAVDRWQYGDS 78
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                                                                                                                                                                                                                                                                                                                   INFORMATION:
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Pratt, Christine
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52.8%;
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Pred. No. 3.6e-13:
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Search completed: May 5, 2003, 16:11:04
Job time: 7.77995 secs

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Maximum Match 100%
Listing first 45 summaries
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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Werner syndrome pr
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                iron-sulfur cluste
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ALIGNMENTS

apoptosis inhibitor hiap-2 - human C; Species: Homo sapiens (man)

C; Date: 17-Jul-1998 #sequence_revision 17-Jul-1998 #text_change 21-Jul-2000

C; Accession: S68450

R:Liston, P.; Roy, N.; Tamai, K.; Lefebvre, C.; Baird, S.; Cherton-Horvat, G.; Faraha Nature 379, 349-353, 1996
A;Title: Suppression of apoptosis in mammalian cells by NAIP and a related family of A;Reference number: A58182; MUID:96149249; PMID:8552191
A;Accession: S68450

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RESULT 2
S68449
                                        A; Description: apoptotic suppressor C; Superfamily: RING finger homology C; Keywords: apoptosis; zinc finger F; 553-597/Domain: RING finger homology
                                                                                                                                                                                                                                           R:Liston, P.; Roy, N.; Tamai, K.; Lefebvre, C.; Baird, S. Mature 379, 349-353, 1996
A;Title: Suppression of apoptosis in mammalian cells by A;Reference number: A58182; MUID:96149249; PMID:8552191
A;Accession: S68449
                                                                                                                                                                                                                                                                                                                                                                               apoptosis inhibitor hiap-1 - human
C;Species: Homo sapiens (man)
C;Date: 17-Jul-1998 #sequence_revision 17-Jul-1998 #text_change 21-Jul-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Description: apoptotic suppressor
C;Superfamily: RING finger homology
C;Keywords: apoptosis; zinc finger
F;567-611/Domain: RING finger homology <RNG>
                                                                                                                                                                              A;Status: nucleic acid sequence not shown A;Molecule type: mRNA A;Residues: 1-604 <LIS>
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                                                                                                                                      C; Function:
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                                                                                                                                                      A;Cross-references: EMBL:U45878; NID:g1184315; PIDN:AAC50371.1; PID:g1184316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Cross-references: EMBL:U45879; NID:g1184317; PIDN:AAC50372.1; PID:g1184318
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Best Local
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                                        zinc finger
finger homology <RNG>
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100.0%; Pred. No. 2.4e-31;
tive 0; Mismatches 0;
98.0%;
Score 301;
DB
2;
Length
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3-methyl-adeniñe

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apoptosis inhibitor - pig
apoptosis inhibitor - pig
C;Species: Sus scrofa domestica (domestic pig)
C;Species: Sus scrofa domestica (domestic pig)
C;Date: 04-Sep-1998 #sequence_revision 04-Sep-1998 #text_change 02-Sep-2000
C;Accession: JC5964
R;Stehlik, C; de Martin, R; Binder, B.R.; Lipp, J.
R;Stehlik, C; de Martin, R; Binder, B.R.; Lipp, J.
R;Stehlik, C; de Martin, R; Binder, B.R.; Lipp, J.
R;Stehlik, C; de Martin, R; Binder, B.R.; Lipp, J.
R;Stehlik, C; de Martin, R; Binder, B.R.; Lipp, J.
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A; Description: apoptotic suppressor
A; Description: apoptosis inhibitor IAP homolog;
C; Keywords: apoptosis; zinc finger
C; Keywords: apoptosis; zinc finger
F; 446-490/Domain: RING finger homology <RRN>
                                                                                                                                                                                                                                                                     Biochem. Biophys. Res. Commun. 243, 827-832, 1998
A;Title: Cytokine induced expression of porcine inhibitor of apoptosis protein (iap) fam
A;Reference number: JC5964; MUID:98162622; PMID:9501011
                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 4
JC5964
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A; Molecule type: mRNA
A; Residues: 1-161,'C',163-422,'Q',424-497 <LIS>
A; Residues: 1-161,'C',163-422,'Q',424-497 <LIS>
A; Residues: EMBL:U45880; NID:91184319; PIDN:AAC50373.1;
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EMBO J. 15, 2685-2694, 1996
A;Title: A conserved family of cellular genes related to
A;Reference number: S69544; MUID:96256286; PMID:8654366
A;Accession: S69544
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S69544
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A; Residues: 1-358 <STE>
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A;Title: Suppression of apoptosis in mammalian cells by
A;Reference number: A58182; MUID:96149249; PMID:8552191
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Residues: 1-497 <DUC>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Date: 06-Dec-1996 #sequence
                                                                                                                                    :Cross-references: GB:U79142; NID:g2957174; PIDN:AAC39171.1; PID:g2957175
:Superfamily: RING finger homology
:307-351/Domain: RING finger homology <RRN>
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EFNRLKTFANFPSGSPVSASTLARAGFLYTGEGDTVRCFSC::AAVDRWQYGDS
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                                                           Score 140; DB Pred. No. 3.8e 6; Mismatches
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                                                                              DB 2;
.8e-10;
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RFKTFCNWPSSIPVHPEQLASAGFYYMGHSDDVKCFCCDGGLRCWESGDDP 143

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C;Accession: A55478
R;Roy, N.; Mahadevan, M.S.; McLean, M.; Shutler, G.; Yaraghid, T.O.; de Jong, P.J.; Surh, L.; Ikeda, J.E.; Korneluk, R.Cell 80, 167-178, 1995
A;Title: The gene for neuronal apoptosis inhibitory protein A;Reference number: A55478; MUID:95112344; PMID:7813013
A;Accession: A55478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       J. Virol. 68, 2521-2528, 1994
A;Title: An apoptosis-inhibiting gene from a nuclear polyhedrosis virus
A;Reference number: A53989; MUID:94187094; PMID:8139034
A;Accession: A53989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Cross-references: EMBL:U75930; NID:g2934903; PIDN:AAC59034.1; PID:g1911281
C;Superfamily: viral apoptosis inhibitor IAP; RING finger homology
F;217-261/Domain: RING finger homology <RRN>
                                                                                                                                                                                   N;Alternate names: NAIP
C;Species: Homo sapiens (man)
C;Date: 05-Jan-1996 #sequence_revision 05-Jan-1996 #text_change 02-Feb-2001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Cross-references: GB:L22564; NID:g456111; PIDN:AAB02610.1; PID:g456114 A;Note: authors translated the codon TGG for residue 28 as Tyr, GAC for C;Superfamilly: vixal apoptosis inhibitor IAP; RING finger homology F;217-261/Domain: RING finger homology <RRN>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      apoptosis-inhibiting protein - Orgyia pseudotsugata multicapsid nuclear polyhedrosis
C;Species: Orgyia pseudotsugata multicapsid nuclear polyhedrosis virus, OpMNPV
C;Date: 15-Oct-1994 #sequence_revision 15-Oct-1994 #text_change 15-Sep-2000
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A;Molecule type: DNA
A;Residues: 1-268 <AHR>
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A;Title: The sequence of the Orgyia pseudotsugata multinucleocapsid nuclear polyhedro A;Reference number: 217011; MUID:97271300; PMID:9126251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     inhibitor of apoptosis protein 3 - Orgyia pseudotsugata nuclear C;Species: Orgyia pseudotsugata nuclear polyhedrosis virus, OpiN C;Date: 16-Jul-1999 #sequence_revision 16-Jul-1999 #text_change C;Accession: T10304
A; Molecule type: mI
A; Residues: 1-1232
                                                                                                                                                                                                                                                             neuronal apoptosis inhibitory protein -
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A; Residues: 1-268 <BIR>
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Best Local
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Pred. No. 3e-09;
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Pred. No. 3e-09;
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luk, R.G.;
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F;470-477/Region: nuclectide-binding motif A (P-lcop)
F;479-496/Domain: transmembrane #status predicted <TMM2>
F:476/Binding site: ATP (Lys) #status predicted
F:618,632,823,923,1035/Binding site: carbohydrate (Asn) (covalent)
                                                                                                                                                                                                                                                                                   A;Title: The DNA sequence of Chilo iridescent virus between A;Reference number: Z14834; MUID:98141693; PMID:9482589 A;Accession: T03183
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C;Species: Mus musculus (house mouse)
C;Date: 11-Jan-2000 #sequence_revision 11-Jan-2000 #text_change 11-Jan-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                probable apoptosis inhibitor - Chilo iridescent virus
C;Species: Chilo iridescent virus
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A; Residues: 1-208 <BAH>
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                                                                                                                                                                                                                                                                                                                                                  Virus Genes 15,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Molecule type: mRNA
A;Residues: 1-1447 <YAR>
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A;Map position: 5q12.2-5q13
                                                                                                                                                            ;159-202/Domain: RING finger homology <RRN>
                                                                                                                                                                               Cross-references: EMBL:AF003534; NID:g2738385; PIDN:AAB94481.1; Superfamily: RING finger homology
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Best Local Similarity
Matches 22; Conser
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Best Local
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enes 15, 235-245, 1997
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2.; Diez, E.; Gros, P.; MacKenzie, me 10, 761-763, 1999
                                                                                                   Similarity
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                                                                                                 38.8%;
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Pred. No. 1.1e-07
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                   A; Molecule type: DNA
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R;Afonso, C.L.; Tulman, E.R.; Lu, Z.; Oma, E.; Kutish, G.F.; J. virol. 73, 533-552, 1999
A;Title: The genome of Melanoplus sanguinipes entomopoxvirus A;Reference number: Z20484; MUID:99102612; PMID:9847359
A;Accession: T28409
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C;Accession: JC7568
R;Lin, J.H.; Deng, G.; Huang, Q.; Morser, J.
Biochem. Biophys. Res. Commun. 279, 820-831, 2000
A;Title: KIAP, a novel member of the inhibitor of apoptosis A;Reference number: JC7568; MUID: 21092523; PMID:11162435
A;Contents: Fetal kidney
                                                                                                                                                          C; Species: Melanoplus sanguinipes entomopoxvirus C; Date: 21-Jan-2000 #sequence_revision 21-Jan-20
                                                                                                                                                                                                       ORF MSV248 probable inhibitor of apoptosis protein (IAP) - Melanoplus sanguinipes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Cross-references: GB:L05494; NID:g289583; PIDN:AAA43835.1; PID.g289584
A;Note: sequence extracted from NCBI backbone (NCBIN:127014, NCBIP:127015)
C;Superfamily: viral apoptosis inhibitor IAP; RING finger homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  R;Crook, N.E.; Clem, R.J.; Miller, L.K.
J. Virol. 67, 2168-2174, 1993
A;Title: An apoptosis-inhibiting baculovirus gene with a zinc A;Reference number: A45679; MUID:93188168; PMID:8445726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            inhibitor-of-apoptosis polypeptide (IAP) - Cydia po
C;Species: Cydia pomonella granulosis virus CpGV
C;Date: 21-sep-1993 #sequence_revision 25-Apr-1997
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A45679
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C; Keywords: apop
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C;Date: 30-Jun-2001 #sequence_revision 30-Jun-2001 #text_change 30-Jun-2001
A;Status: preliminary; translated
                                                                                                                                    C; Accession: T28409
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A; Residues: 1-275 <CRO>
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A; Residues: 1-298 <LIN>
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                                                                                                                                                                                                                                                                                                                                                                   ELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKLCDSP 55
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19; Conservative
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Pred. No. 1.4e-05;
4; Mismatches 20;
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Pred. No. 2.8e-07;
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    GB/EMBL/DDBJ
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                                                                                                                 E.; Kutish, G.F.;
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A;Description: apoptotic suppressor
C;Superfamily: apoptosis inhibitor IAP homolog; RING finger homology
C;Keywords: apoptosis; zinc finger
F;445-489/Domain: RING finger homology <RNG>
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C;Genetics:
A;Note: MSV248
                                                                                                                                                                                                                                                                          R;Duckett, C.S.; Nava, V.E.; Gedrich, R.W.; Clem, R.J.; van Dongen, J.L.; Gilfillan, NEMBO J. 15, 2685-2694, 1996
A;Title: A conserved family of cellular genes related to the baculovirus iap gene and A;Reference number: S69544; MUID:96256286; PMID:8654366
                                                                                                                                                                                                                                                                                                                                                                                                  apoptosis inhibitor IAP homolog - fruit fly (Drosophila melanogaster) C;Species: Drosophila melanogaster C;Date: 06-Dec-1996 #sequence_revision 13-Mar-1997 #text_change 21-Jan-2000
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Nature 379, 349-553, 1996
A;Title: Suppression of apoptosis in mammalian cells by
A;Reference number: A58182; MUID:96149249; PMID:8552191
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A; Residues: 1-497 < DU
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A;Accession: S78528
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Date: 17-Jul-1998 #sequence_revision 17-Jul-1998 #text_change 17-Nov-2000
                                             Superfamily: apoptosis inhibitor IAP homol-446-490/Domain: RING finger homology <RRN>
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                                                                     inhibitor IAP homolog; RING finger homology
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Pred. No.
Score 102;
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A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 1-275 <AHR>
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                                                                                                                                             A;Cross-references: EMBL:U75930; NID:g2934903; PIDN:AAC59040.1; PID:g1911287
C;Superfamily: viral apoptosis inhibitor IAP; RING finger homology
F;223-268/Domain: RING finger homology <RRN>
                                                                                                                                                                                                                                                                                                                                                        apoptosis-inhibiting protein 1 - Orgyia pseudotsugata nuclear polyhedrosis virus C;Species: Orgyia pseudotsugata nuclear polyhedrosis virus, OpMNPV C;Date: 16-Jul-1999 #sequence_revision 16-Jul-1999 #text_change 15-Sep-2000
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                                 5 RMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKLGDSP
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BIR4_MOUSE
BIR4_RAT
PIRE_MOUSE
BIRE_MOUSE
BIRE_MOUSE
IAP1_MOUSE
IAP1_LOROME
BIRL_HUMAN
BIRL_HUMAN
BIRL_HUMAN
BIRL_HUMAN
BIRL_GORGO
IAP_GORGO
IAP_GORGO
IAPL_ASFB7
BIRS_HUMAN
BIRL_HUMAN
BIRL_ASFCH
BIRS_HUMAN
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BIR3_MOUSE
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45	44	43	42	41	40	39	38	37	36	35	34
53.5	53.5	54.5	54.5	54.5	56	56	57	60	61.5	68.5	68.5
17.4	17.4	17.8	17.8	17.8	18.2	18.2	18.6	19.5	20.0	22.3	22.3
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HIRA_FUGRU	IF2_HELPJ	METH_MYCTU	BIR1_YEAST	YMV6_CAEEL	WRN_HUMAN	IAP2_NPVAC	ORC1_SCHPO	WRN_MOUSE	BIR5_RAT	IAPL_ASFM2	IAPL_ASFM1
042611	Q9zm46	033259	P47134	P34508	Q14191	P41454	P54789	009053	09 j hy7	011453	011452
fugu rubrip	helicobacte	mycobacteri	saccharomyc	caenorhabdi	homo sapien	autographa	schizosacch	mus musculu	rattus norv	african swi	african swi

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STRUCTURE BY NMR OF 266-363. MEDLINE-9932054; PubMed-10404221; Hinds M.G., Norton R.S., Vaux D.L., Day C.L.; Hinds M.G., Norton R.S., Vaux D.L., Day C.L.; "Solution structure of a baculoviral inhibitor of apoptosis (IAP) repeat."; Nat. Struct. Biol. 6:648-651(1999). Nat. Struct. Biol. 6:648-651(1999). -i- FUNCTION: APOPTOTIC SUPPRESSOR. THE BIR MOTIFS REGION INTERACTS WITH THE RECEPTOR ASSOCIATED FACTORS 1 AND 2 (TRAF1 AND TRAF2) TO FORM AN HETEROMERIC COMPLEX, WHICH IS THEN RECRUITED TO THE TUMOR NECROSIS FACTOR RECEPTOR 2 (THER2).	Uren A.G., Pakusch M., Hawkins C.J., Puls K.L., Vaux D.L.; Uren A.G., Pakusch M., Hawkins C.J., Puls K.L., Vaux D.L.; "Cloning and expression of apoptosis inhibitory protein homologs that function to inhibit apoptosis and/or bind tumor necrosis factor receptor-associated factors."; Proc. Natl. Acad. Sci. U.S.A. 93:4974-4978(1996). [4] SEQUENCE FROM N.A. TISSUE-Uterus; Strausberg R.; Submitted (OCT-2001) to the EMBL/GenBank/DDBJ databases. [5]	SEQUENCE FROM N.A. TISSUE-Liver; MEDLINE-96149249; PubMed-8552191; MEDLINE-96149249; PubMed-8552191; Liston P., Roy N., Tamai K., Lefebvre C., Baird S., Cherton-Horvat G., Farahani R., McLean M., Ikeda J., Mackenzle A., Korneluk R.G.; "Suppression of apoptosis in mammalian cells by NAIP and a related family of IAP genes."; Nature 379:349-353(1996). [3] SEQUENCE FROM N.A. TISSUE-Fetal liver;	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. NCBI_TaxID=9606; [1] SEQUENCE FROM N.A. SEQUENCE FROM N.A. MEDLINE=96128127; PubMed=8548810; Rothe M., Pan MG., Henzel W.J., Ayres T.M., Goeddel D.V.; "The TWRR2-TRAF signaling complex contains two novel proteins related to baculoviral inhibitor of apoptosis proteins."; Cell 83:1243-1252(1995).	ARD; PRT; 618 AA. ; Created) ; Last sequence update) ; Last annotation update) sat-containing protein 3 (Inhibit (HIAP-2) (C-IAP1) (TMFR2-TRAF sig

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RESULT 2
BIR2_HUMAN
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InterPro; IPR001315; CARD:
InterPro; IPR001841; Znf_ring.
InterPro; IPR001841; Znf_ring.
InterPro; IPR001841; Znf_ring.
InterPro; IPR001841; Znf_ring.
InterPro; IPR00184; Znf, 3.
SMARR; SM00238; BIR; 3.
SMARR; SM00114; CARD; 1.
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BIR2_HUMAN STANDARD; PRT; 604 AA.
(2)3489; Q16628; Q9UP46; Q9HC27;
01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Baculoviral IAP repeat-containing protein 1 (Inhibitor of apoptosis protein 1) (HIAP1) (HIAP-1) (C-IAP2) (TNFR2-TRAF signaling complex
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CONFLICT
CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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EMBL; U45879; AAC50372.1; ...
EMBL; U37547; AAC50508.1; ...
EMBL; BC016174; AAH16174.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CONFLICT
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                                                                                                                                                                                                                                                                                1 CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGIMLDNWKLGDSP 55
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SIMILARITY: BELONGS TO THE IAP FAMILY.

SIMILARITY: CONTAINS 3 BIR REPEATS.

SIMILARITY: CONTAINS 1 CARD DOMAIN.

SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SUBUNIT: Interacts with SMAC and with PRSS25; these interact inhibit apoptotic suppressor activity.

SUBCELLULAR LOCATION: Cytoplasmic (Potential).

TISSUE SPECIFICITY: PRESENT IN MANY FETAL AND ADULT TISSUES MAINLY EXPRESSED IN ADULT SKELETAL MUSCLE, THYMUS, TESTIS, (AND PANCREAS, LOW OR ABSENT IN BRAIN AND PERIPHERAL BLOOD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WWW-"http://www.infobiogen.fr/services/chromcancer/Genes/BIRC3ID239.html".
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DATABASE: NAME=Atlas Genet. Cytogenet. Oncol. Haematol.;
                                                                                                                                                                                                                                                          CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKLGDSP
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AAC50372.1; -.
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Pred. No. 6.6e-33;
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BIR 2.
BIR 3.
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Baens M., Steyls A., Dierlamm J., De Wolf-Peeters C., Marynen P.;
"Structure of the MLT gene and molecular characterization of the
genomic breakpoint junctions in the t(11;18)(q21;q21) of marginal zc
B-cell lymphomas of MALT type.";
Genes Chromosomes Cancer 29:281-291(2000).
Genes Chromosomes Cancer 29:281-291(2000).
INTERACTS
WITH THE RECEPTOR ASSOCIATED FACTORS 1 AND 2 (TRAF1 AND TRAF2) 1
FORM AN HETEROMERIC COMPLEX, WHICH IS THEN RECRUITED TO THE TUMC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE=96128127; PubMed=8548810; Rothe M., Pan M.-G., Henzel W.J., Ayres T.M., Goeddel D.V.; "The TNFR2-TRAF signaling complex contains two novel proteit to baculoviral inhibitor of apoptosis proteins."; Cell 83:1243-1252(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                      This
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE-99252096; PubMed-10233894; Horrevoets A.J., Fontijn R.D., van ten Cate J.W., Pannekoek H.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Uren A.G., Pakusch M., Hawkins C.J., Puls K.L., "Cloning and expression of apoptosis inhibitory function to inhibit apoptosis and/or bind tumor receptor-associated factors.", proc. Natl. Acad. Sci. U.S.A. 93:4974-4978(1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE-96149249; PubMed-8552191;
Liston P., Roy N., Tamai K., Lefebvre C., Baird
Farahani R., McLean M., Ikeda J., Mackenzie A.,
"Suppression of apoptosis in mammalian cells by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein 1) (IAP homolog
BIRC2 OR API1 OR IAP1 O
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MEDLINE-96209843; P
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TISSUE-Fetal liver
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                                                                                                                                                                                                                                NECROSIS FACTOR RECEPTOR 2 (TNFR2).

SUBUNIT: Interacts with SMAC and with PRSS25; these interactions inhibit apoptotic suppressor activity.

SUBCELLULAR LOCATION: Cytoplasmic (Potential).

TISSUE SPECIFICITY: HIGHLY EXPRESSED IN FETAL LUNG, AND KIDNEY. IN THE ADULT, EXPRESSION IS MAINLY SEEN IN LYMPHOID TISSUES, INCLUDING SPLEEN, THYMUS AND PERLPHERAL BLOOD LYMPHOCYTES.

DISEASE: Involved in a t(11;18)(q21;q21) chromosomal translocation recurrent in low-grade MALT lymphoma (Mucosa-associated lymphoid tissue). This translocation is found in approximately 50% of cytogenetically abnormal low-grade MALT lymphoma and involves MALT and ATED.
                                                                                         SIMILARITY: BELONGS TO THE IAP FAMILY.
SIMILARITY: CONTAINS 3 BIR REPEATS.
SIMILARITY: CONTAINS 1 CARD DOMAIN.
SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
SWISS-PROT entry is copyright. It is produced through en the Swiss Institute of Bioinformatics and the En
                                                                                                                                                                                                                      and BIRC2
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OR IAP1 OR MIHC
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NAIP and
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Best Local S
Matches 54
                                                                                                                                                          BIR3_MOUSE STANDARD; PRT; 612 AA. Q62210; 008864; 01-NOV-1997 (Rel. 35, Created) 01-NOV-1997 (Rel. 35, Last sequence update) 15-JUN-2002 (Rel. 41, Last annotation update) 18-JUN-2002 (Rel. 41, Last annotation update) Baculoviral IAP repeat-containing protein 3 (In) Protein 2) (MIAP-2), MIS MUSCHLUS (MOUSE).
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REPEAT
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                SEQUENCE FROM N.A., AND PA
MEDLINE-96128127; PubMed-8
Rothe M., Pan M.-G., Henze
"The TNFR2-TRAF signaling
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SMART; SM00114; CARD; 1
SMART; SM00184; RING; 1
PROSITE; PS01282; BIR_RI
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                                                                                                                            Eukaryota; Metazoa;
Mammalia; Eutheria;
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arPro; IPR001315; CARD.
arPro; IPR001841; Znf_ring.
arPro; Zf-C3HC4; 1.
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PS00518; ZF_RING_1;
PS50089; ZF_RING_2;
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                            ., AND PARTIAL SEQUENCE.
PubMed=0548810;
G., Henzel W.J., Ayres T.M., Gceddel D.V.;
                                                                                                                            Chordata;
Rodentia;
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98.2%;
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complex contains two novel proteins related of apoptosis proteins.";
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Sciurognathi; Muridae;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Chromosomal translocation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   e 301; DE NO. 4e-32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REET TO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FOR TRANSLOCATION TO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1;
                                                                                                                              Muridae;
                                                                                                                                                                                                                    (Inhibitor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             :--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 604;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                          Euteleostomi;
; Murinae; Mus
                                                                                                                                                                                                                    of apoptosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                         55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FORM
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BIR2_MOUSE
ID BIR2_M
AC 008863
.. DT 01-NOV

BIR2_MOUSE 008863; 01-NOV-1997 01-NOV-1997

(Rel. 35, Created) (Rel. 35, Last seq

sequence update)

STANDARD;

PRT;

600

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RESULT

4

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밁
                   Qy
                                           Query Match
Best Local Similarity
Matches 52; Conserv
                                                                                                                                                                                                                                                                                                                                                                 EMBL; L49433;
EMBL; U88909;
HSSP; Q13490;
MGD; MGI:11970
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Genomics
                                                                                           DOMAIN
ZN_FING
CONFLICT
SEQUENCE
                                                                                                                                                                                           PROSITE;
                                                                                                                                                                                                                               PROSITE;
                                                                                                                                                                                                                                                                                          Pfam;
Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                        use by non-profit institutions as long as its content is modified and this statement is not removed. Usage by and fo entities requires a license agreement (See http://www.isb-sib.or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NECROSIS FACTOR RECEPTOR 2 (TNFR2).

I SUBUNIT: Interacts with SMAC and with PRSS25; these interact. inhibit apoptotic suppressor activity (By similarity).

SUBCELLULAR LOCATION: Cytoplasmic (Potential).

TISSUE SPECIFICITY: EXPRESSED IN HEART, BRAIN, SPLEEN, LUNG, LIVER, SKELETAL MUSCLE, KIDNEY, AND TESTIS.

SIMILARITY: BELONGS TO THE IAP FAMILY.

SIMILARITY: CONTAINS 3 BIR REPEATS.

SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
TISSUE-Skeletal muscle;
MEDLINE=98110590; PubMed=9441758;
                                                                                                                                            REPEAT
REPEAT
                                                                                                                                                                                                                                                     Pfam; PF00653; BIR; 3.
SMART; SM00238; BIR; 3.
SMART; SM00114; CARD; 1
SMART; SM00184; RING; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the El the European Bioinformatics Institute. There are no resti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Cell 83:1243-1252(1995).
[2]
                                                                                                                                                                                                                                                                                                                          InterPro; IPR001370; BIR.
InterPro; IPR001315; CARD.
InterPro; IPR001841; Znf_ring.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Liston P., Lefebvre C., Fong W.G., Xuan J.Y., Korneluk R.G.; "Genomic characterization of the mouse inhibitor of apoptosis protein 1 and 2 genes.";
                                                                                                                                                                    Apoptosis;
REPEAT
45
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FUNCTION: APOPTOTIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FUNCTION: APOPTOTIC SUPPRESSOR. THE BIR MOTIFS REGION INTERACTS WITH THE RECEPTOR ASSOCIATED FORM ALORS 1 AND 2 (TRAFI AND TRAF2) TO FORM AN HOTEROWERIC COMPLEX, WHICH IS THEN RECRUITED TO THE TUMOR NECROSIS FACTOR RECEPTOR 2 (THER2)
           CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKLGDSP
CELYRMSTYSAFPRGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKQGDSP
                                                                                                                                                                                                                                                                                                                                                                 MGI:1197009; Birc3
                                                                                                                                                                                                                                                                                                      PF00097;
PF00619;
                                                                                                                                                                                                                  PS01282; BIR_REPEAT_1; PS50143; BIR_REPEAT_2; PS50209; CARD; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 46:495-503(1997)
                                                                                                                                                                                           PS00518; ZF_RING_1; PS50089; ZF_RING_2;
                                                                                           46
177
262
447
565
380
612
                                                                                                                                                                                Zinc-finger;
                                            Conservative
                                                                      113
7 243
329
7 537
600
380
69676 MW;
                                                                                                                                                                                                                                                                                                    zf-C3HC4;
CARD; 1.
                                                                                                                                                                                                                                                                                                                                                                              1QBH
                                                                                                                                                                                                                                                                                                                                                                                        AAC42078.1; -. AAC53532.1; -.
                                                         94.8%;
                                                                                                                                                                                Repeat.
                                             0
                                                                                                         RING-TYPE.
E -> K (IN
                                                         Score
Pred.
                                                                                                                                BIR 1.
BIR 2.
BIR 3.
CARD.
                                                                                                                                                                                                       FALSE_NEG
                                                                                            -> K (IN REF. 2).
E08969D93C6C610D CRC64;
                                             Mismatches
                                                                                                                                                                                                                                ωw
                                                         291;
No. 8
                                                          DB 1;
).5e-31;
                                             Ψ
                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        these interactions
                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          restrictions
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99
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                                             Gaps
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BIR_CHICK
ID BIR_C
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Best Local
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InterPro; IPR001315; CARD.
InterPro; IPR001841; Znf_ring.
InterPro; IPR001841; Znf_ring.
Pfam; PF00097; zf-C3HC4; 1.
Pfam; PF00619; CARD; 1.
Pfam; PF006519; CARD; 1.
Pfam; PF00653; BIR; 3.
SMART; SM00218; BIR; 3.
SMART; SM00114; CARD; 1.
SMART; SM00114; CARD; 1.
SMART; SM00114; RING; 1.
                                                                                                                                                                              DOMAIN
ZN_FING
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EN the European Bioinformatics Institute. There are no restruse by non-profit institutions as long as its content modified and this statement is not removed. Usage by and entities requires a license agreement (See http://www.isb-sor.send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -I- FUNCTION: APOPTÒTIC SUPPRESSOR. THE BIR MOTIFS REGION INTERACTS WITH THE RECEPTOR ASSOCIATED FACTORS 1 AND 2 (TRAF1 AND TRAF2) TO FORM AN HETEROMERIC COMPLEX, WHICH IS THEN RECRUITED TO THE TUMOF NECROSIS FACTOR RECEPTOR 2 (TNFR2) (BY SIMILARITY).

-I- SUBUNIT: Interacts with SMAC and with PRSS25; these interactions inhibit apoptotic suppressor activity (By similarity).

-I- SUBCELLULAR LOCATION: Cytoplasmic (Potential).

-I- SIMILARITY: BELONGS TO THE IAP FAMILY.

-I- SIMILARITY: CONTAINS 3 BIR REPEATS.

-I- SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      protein 1) (MIAP1) (MIAP-1).
BIRC2 OR API1 OR IAP1
Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
 BIR_CHICK
                                                                                                                                                                                                                                                                          PROSITE; PS01282; BIR_REPEAT_1;
PROSITE; PS50143; BIR_REPEAT_2;
PROSITE; PS50209; CARD; 1.
PROSITE; PS00518; ZF_RING_1; FAI
PROSITE; PS50089; ZF_RING_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HSSP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE=98110590; PubMed=9441758;
Liston P., Lefebvre C., Fong W.G., Xuan J.Y., Korneluk R.G.
"Genomic characterization of the mouse inhibitor of apoptos
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MGD; MGI:1197007;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; U88908; AAC53531.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Genomics 46:495-503(1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             15-JUN-2002
Baculoviral
                                                                                                                                                                                                                         REPEAT
                                                                                                                                                                                                                                     REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TISSUE=Skeletal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=10090
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                                                                    26
                                                               2 genes."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q13490;
                                                                                                                                     Similarity
                                                                                                                                                                              600
                                                                                                                                                                                           2inc-finger;
27 94
167 233
253 320
436 525
553 588
                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (Rel. 41, Last annotation update)

IAP repeat-containing protein 2 (Inhibitor of apoptosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1QBH
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                                                                                                                                                                                                                                                                          8; ZF_RING_1; FALSE_NEG
9; ZF_RING_2; 1.
STANDARD;
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                                                                                                                                   92.5%;
90.9%;
                                                                                                                                                                              67198 MW;
                                                                                                                                                                                                                                                               Repeat.
                                                                                                                                                                         BIR 1.
BIR 2.
BIR 3.
CARD.
CARD.
RING-TYPE.
M; AD7F73E6849317D. CRC64;
                                                                                                                      1;
                                                                                                                                 Score 284; DB 1
Pred. No. 7e-30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
 PRT;
                                                                                                                      Mismatches
 611
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (See http://www.isb-sib.ch/announce/
                                                                                                                                                  DB 1;
⋛
                                                                                                                                                 Length 600;
                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       apoptosis protein
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL outstation
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                                               Matches
                                                            Query Match
Best Local
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InterPro; IPR001315; CARD.
InterPro; IPR001841; Znf_ring.
Pfam; PF00097; zf-C3HC4; 1.
Pfam; PF00619; CARD; 1.
Pfam; PF00653; BIR; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q90660;
01-NOV-1997
01-NOV-1997
16-OCT-2001
Inhibitor of
                                                                                                ZN_FING
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                          This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the Entropean Bioinformatics Institute. There are no restructe by non-profit institutions as long as its content use by non-profit institutions as long as its content modified and this statement is not removed. Usage by and
                                                                                                                                     REPEAT
REPEAT
                                                                                                                                                            Apoptosis;
REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -!- FUNCTION: APOPTOTIC SUPPRESSOR (BY SIMILARITY).
-!- SUBCELLULAR LOCATION: PREDOMINANTLY NUCLEAR.
-!- TISSUE SPECIFICITY: CELLS OF THE T LYMPHOCYTE LINEFGE. FOUND BOTH CORTICAL AND MEDULLARY CELLS OF THE THYMUS.
-!- DEVELOPMENTAL STAGE: HIGH LEVELS ARE INDUCED WITHIN 4-8 HOURS T-CELL ACTIVATION IN SPLEEN AND THYMUS.
-!- SIMILARITY: BELONGS TO THE IAP FAMILY.
-!- SIMILARITY: CONTAINS 3 BIR REPEATS.
-!- SIMILARITY: CONTAINS 1 CARD DOMAIN.
-!- SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gallus gallus (Chicken).
Gallus gallus (Chicken).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasiani
                                                                                                                                                                                                                                                 SMART; SM00238; BIR; 3.
SMART; SM00114; CARD; 1.
SMART; SM00184; RING; 1.
                                                                                                                                                                                                                                                                                                                                                                 EMBL; U27466; HSSP; Q13490;
                                                                                                                                                                                                                                                                                                                                                                                                      or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA Cell Biol. 15:981-98
                                                                                                                          DOMAIN
                                                                                                                                                                                       PROSITE;
                                                                                                                                                                                                                                      PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                  entities requires a license agreement
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "ITA, a vertebrate homologue of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=97101112; PubMed=8945639;
Digby M.R., Kimpton W.G., York J.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=9031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               protein).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             lymphocytes.
29
CELYRMSTFSTFPVNVPVSERRLARAGFYYTGVQDKVKCFSCGLVLDNWQPGDN
             CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKLGDS
                                                          Similarity
                                                                                                                                                                                                               PS01282; BIR_REPEAT_1;
PS50143; BIR_REPEAT_2;
PS50209; CARD; 1.
                                                                                                                                                                                      PS00518; ZF_RING_1; PS50089; ZF_RING_2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           of.
                                                                                                                                                            Zinc-finger;
30 97
                                                                                                                         30
176
262
446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (Rel. 35, Created)
(Rel. 35, Last sequence update)
(Rel. 40, Last annotation update)
f apoptosis protein (IAP) (Inhibitor of
                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                              AAB48118.1; -.
                                                                                                                                                                                                                                                                                                                                                                  HEÖT
                                                                                                 A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15:981-988(1996)
                                                                                                             242
329
536
                                                                                                 69009 MW;
                                                            80.5%;
81.5%;
                                                                                                                                                                          Repeat; Nuclear
                                               4;
                                                           Score
Pred.
                                                                                                RING-TYPE.
; 53FC9136F34EBDDD CRC64;
                                                                                                                                   BIR 2.
BIR 3.
                                                                                                                                                              BIR
                                                                                                                                                                                                   FALSE_NEG.
                                                                                                                          CARD.
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                                                Mismatches
                                                           247;
No. 5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          that is expressed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Connick T.E., Lowerthal
                                                                                                                                                                                                                                                                                                                                                                                                                (See http://www.isb-sib.ch/announce/
                                                                                                                                                                        protein
                                                            DB 1;
.6e-25;
                                               6
                                                                        Length
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                                                                        611;
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82
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                                               0;
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                                               Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Duckett C.S., Nava V.E., Gedrich R.W., Clem R J., v Gilfillan M.C., Shiels H., Hardwick J.M., Thompson "A conserved family of cellular genes related to the gene and encoding apoptosis inhibitors.";
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Liston P., Roy N., Tamai K., Lefebvre C., Baird S., C
Farahani R., McLean M., Ikeda J., Mackenzie A., Korne
"Suppression of apoptosis in mammalian cells by NAIP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        P98170; Q9NQ14;
01-0CT-1996 (Rel. 34, Last sequence up
01-0CT-1996 (Rel. 34, Last sequence up
15-JUN-2002 (Rel. 41, Last annotation
Baculoviral IAP repeat-containing prot
protein 3) (X-linked inhibitor of apop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Liu Z., Sun C., Olejniczak E.T., Meadows
Herrmann J., Wu J.C., Fesik S.W.;
"Structural basis for binding of Smac/DIA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "HtrA2 promotes cell death through its ability to antagonize inhibitor J. Biol. Chem. 277:445-454(2002).
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Nature 379:349-353(1996).
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BIRC4 OR API3 OR IAP3 OR XIAP.
                                                                                                                                                                                                                                                                                                                                                                                                                                         Nature 408:1004-1008(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRUCTURE BY NMR OF 241-356 IN COMPLEX WITH MEDLINE-21020961; PubMed=11140637;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nature 388:300-304(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE-97373959; PubMed-9230442;
Deveraux Q.L., Takahashi R., Salvesen G
"x-linked TAP is a direct inhibitor of o
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                             SIMILARITY: BELONGS TO THE IAP FAMILY.
SIMILARITY: CONTAINS 3 BIR REPEATS.
SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
                                                                                                                                                                                     DOMAIN: The second BIR cand -7, while the third
                                                                                                                                                                                                                                                                          FUNCTION: Apoptotic suppressor. Inhibitor of SUBUNIT: Interacts with SMAC and with PRSS25; inhibit apoptotic suppressor activity.
SUBCELLULAR LOCATION: Cytoplasmic.
TISSUE SPECIFICITY: UBIQUITOUS, EXCEPT PERLENTERSOR STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT 
                                                                                                                                                                                                                                                         LEUKOCYTES.
                                                                                                                              third BIR domains.
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                                                                                                                                                     is sufficient to inhibit caspase-3 s involved in caspase-9 inhibition. d PRSS25 are mediated by the second
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Burke R.,
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i; Hominidae;
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Korneluk R.G.;
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JT 15-JUN-2002 (Rel. 41, Last annotation update)

DE Baculoviral IAP repeat-containing protein 4 (In)

DE protein 3) (X-linked inhibitor of apoptosis pro

CIAP homolog A) (MIAP3) (MIAP-3).

HRC4 OR API3 OR XIAP OR AIPA OR MIHA.
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Best Local
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EMBL; U32974; AAC50518
EMBL; AL121601; CAB953
PDB; 1G3F; 10-JAN-01.
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CONFLICT
SEQUENCE
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MUTAGEN
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PROSITE;
PROSITE;
PROSITE;
                                                                                                            MEDLINE-96209843; pubMed-8643514; Uren A.G., Pakusch M., Hawkins C.J., "Cloning and expression of apoptosis function to inhibit apoptosis and/or receptor associated factors.";
                                                                                                                                                                                                                           SEQUENCE FROM N.A.
STRAIN-C57BL/6 X CBA;
MEDLINE-96209843; Publ
                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vert
Mammalia; Eutheria; Rodentia; Sciurognathi;
NCBI_TaxID=10090;
   Farahani
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SMART; SM00184; RING; 1
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                           SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Genew;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Apoptosis; Z:
3D-structure
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MIM; 300079;
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                                                                                    Natl. Acad.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PS01282; BIR_REPEAT_1; 3.
PS50143; BIR_REPEAT_2; 3.
PS50143; ZF_RING_1; FALSE
PS50089; ZF_RING_2; 1.
                           FROM
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   Lefebvre
                              Z.A
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AAC50518.1; -.
1; CAB95312.1; -.
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52.8%;
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С.
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                                                                                    U.S.A.
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   Korneluk
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BIR 2.
BIR 3.
RING-TYPE.
D->S: REDUCED INT
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S -> C (IN R
Q -> P (IN R
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Pred. No. 2e-13;
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                                                                                    93:4974-4978(1996)
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-> P (IN REF. 2).
9D394C16D45EB635
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R.G., Mackenzie
                                                                                                                                          Puls K.L.,
inhibitory
bind tumor
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necrosis factor
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                                                                                                                                                                                                                                                                                                                                                                              Murinae;
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(X-linked IAP)
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Best Loc
Matches
O9R016;
16-OCT-2001 (Rel. 40, Createa)
16-OCT-2001 (Rel. 40, Last sequence update)
15-URY-2002 (Rel. 41, Last annotation update)
15-JUN-2002 (Rel. 41, Last annotation update)
15-JUN-2002 (Rel. 41, Last annotation update)
15-JUN-2002 (Rel. 41, Last annotation update)
16-JUN-2002 (Rel. 41, Last annotation update)
17-JUN-2002 (Inhibitor of apoptosis protein) (X-linked Inhibitor of All Inhibitor of All Inhibitor of All Inhibitor of All Inhibitor of All Inhibitor of All Inhibitor of All Inhibitor of All Inhibitor of All Inhibitor of All Inhibitor of All Inhibitor of All Inhibitor of All Inhibitor of All Inhibitor of All Inhibitor of All Inhibitor of All Inhibitor of All Inhibitor of All Inhibitor of All Inhibitor of All Inhibitor of All Inhibitor of All Inhibitor of All Inhibitor of All Inhibitor of All Inhibitor of All I
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InterPro; IPR001841; Znf_ring.
Pfam; PF00097; Zf-C3HC4; 1.
Pfam; PF00053; BIR; 3.
SMART; SM00238; BIR; 3.
SMART; SM00184; RING; 1.
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or send a
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PROSITE; PS01282; BIR_REPEAT_1;
PROSITE; PS005143; BIR_REPEAT_2;
PROSITE; PS00518; ZF_RING_1; FAI
PROSITE; PS50089; ZF_RING_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SMART;
                                                                                                                                                                                                                            BIR4_RAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL; U36842; AAC52594.1;
EMBL; U88990; AAB58376.1;
HSSP; Q13490; 1QBH.
MGD; MGI:107572; Birc4.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Submitted (JUN-1997) to -1- FUNCTION: Apoptotic
                                                                                                                                                                                                                                                                                                                        26
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SUBCELLULAR LOCATION: Cytoplasmic (By similarity).

DOMAIN: The second BIR domain is sufficient to inhibit caspase-3 and -7, while the third BIR is involved in caspase-9 inhibition. The interactions with SMAC and PRSS25 are mediated by the second and third BIR domains (By similarity).

SIMILARITY: BELONGS TO THE IAP FAMILY.

SIMILARITY: CONTAINS 3 BIR REPEATS.

SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            s SWISS-PROT entry is copyright. It is produced through ween the Swiss Institute of Bioinformatics and the EME European Bioinformatics Institute. There are no restropy pon-profit institutions as long as its content
                                                                                                                                                                                                                                                                                                                                        ELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKLGDS
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                                                                                                                                                                                                                                                                                                                        EFNRLKTFANFPSSSPVSASTLARAGFLYTGEGDTVQCFSCHAAIDRWQYGDS
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27; Conser
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26 93 BIR
163 230 BIR
264 329 BIR
264 329 BIR
264 329 BIR
317 317 E -
316 316 S -
346 346 S -
346 346 S -
346 346 S -
346 360 S -
346 469 V -
469 468 V -
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468
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163
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                                                                                                                                                                                                                            STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                  49.8%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MW.
                                                                                                                                                                                                                                                                                                                                                                                               Score 153; DB
Pred. No. 1.3e
8; Mismatches
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BIR 2.
BIR 3.
RING-TYPE.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 1;
.3e-12;
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of caspase
                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 496;
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SMART; SM00238; BIR; 3.

SMART; SM00184; RING; 1.

PROSITE; PS01282; BIR_REPEAT_1; 3

PROSITE; PS50143; BIR_REPEAT_2; 3

PROSITE; PS500518; ZF_RING_1; FALS:

PROSITE; PS50089; ZF_RING_2; 1.
                                                                                                                    062640;
15-DEC-1998 (Rel. 37, Created)
15-DEC-1998 (Rel. 37, Last sequence update)
16-CCT-2001 (Rel. 40, Last annotation updat
Putative inhibitor of apoptosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REPEAT
ZN_FING
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This SWISS-PROT entry is copyright. It is produced through a collaboratic between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on it use by non-profit institutions as long as its content is in no was modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce or send an email to license@isb-sib.ch).
                                                           Sus scrofa (Pig).
Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Apoptosis;
REPEAT
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HSSP;
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Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REPEAT
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SUBCUIT: Interacts with SMAC and with PRSS25; these interactions inhibit apoptotic suppressor activity (By similarity).

SUBCELLULAR LOCATION: Cytoplasmic (By similarity).

DOMAIN: The second BIR domain is sufficient to inhibit caspase-3 and -7, while the third BIR is involved in caspase-9 inhibition. The interactions with SMAC and PRSS25 are mediated by the second and third BIR domains (By similarity).

SIMILARITY: BELONGS TO THE IAP FRAMILY.

SIMILARITY: CONTAINS 3 BIR REPEATS.

SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
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                                                                                                                                                                                                                                                                                                                                                                                                                                   ELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKLGDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AB033366;
Q13490; 1Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    norvegicus (Rat)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity 27; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    26
163
264
449
496 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Zinc-finger; Repeat.
26 93 BI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                        STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BAA85304.1;
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329
484
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Rodentia;
                                                                Chordata; Craniata; Vertebrata; Cetartiodactyla; Suina; Suidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 49.5%;
50.9%;
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BIR 2.
BIR 3.
RING-TYPE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 152;
Pred. No. 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FALSE_NEG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Rat
                                                                                                                                                                                                                                                                        PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         E250E3C77461A469
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                                                                                                                                                                                                                                                                        358
                                                                                                                                                                              update)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1.7e-12;
hes 18;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CRC64;
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                                                                  Euteleostomi;
Sus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              496
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SEQUENCE FROM N.A

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BIRG
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Best Local :
                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                    Pfam: PF00097; zf-C3HC4; 1
Pfam: PF000619; CARD; 1.
Pfam: PF000639; BIR; 2.
SMAAT; SM00238; BIR; 2.
SMAAT; SM00114; CARD; 1.
SMAAT; SM00184; RING; 1.
SMART; SM00184; RING; 1.
PROSITE; PS01282; BIR_REPE.
PROSITE; PS50143; BIR_REPE.
PROSITE; PS50143; BIR_REPE.
PROSITE; PS50018; ZF_RING_
PROSITE; PS00018; ZF_RING_
PROSITE; PS00018; ZF_RING_
PROSITE; PS00018; ZF_RING_
                                                                                                                              09JIB3;
16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
15-OCT-2002 (Rel. 41, Last annotation updat
Baculoviral IAP repeat-containing protein 1
'-hibitory protein 7).
                                                                                                                                                                                                                                                                                                                                                                    ZN_FING
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
         "Genomic sequence analysis of the mouse Naip gene array.";
"Genome Res. 10:1095-1102(2000).
-I- FUNCTION: PREVENTS MOTOR-NEURON APOPTOSIS INDUCED BY A VARIETY OF
                                                                                                  Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                               MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                   BIRG_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HSSP; Q13490; 1QBH.
InterPro; IPR001370; BIR.
InterPro; IPR001315; CARD.
InterPro; IPR001841; Znf_ring.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL; U79142; AAC39171.1; HSSP; Q13490; 1QBH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                the European Bioinformatics Institute.
                                                      SEQUENCE FROM N.A.
MEDLINE-20414747; PubMed-10958627;
                                                                                      NCBI_TaxID=10090
                                                                                                                         Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                           DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                        REPEAT
                                                                                                                                                                                                                                                                           93
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                                                                                                                                                                                                                                                                          RFKTFCNWPSSIPVHPEQLASAGFYYMGHSDDVKCFCCDGGLRCWESGDDP 143
                                                                                                                                                                                                                                                                                                RMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMI.DNWKLGDSP 55
                                                                                                                                                                                                                                                                                                                                                                                                                              TE; PS50143; BIR_REPEAT_1; 2
TE; PS50209; CARD; 1.
"E; PS50518; ZF_RING_1; FALSE
S; PS50089; ZF_RING_1; FALSE
1.5; 71
                                                                                                                                                                                                                                                                                                                        25;
                                                                                                                                                                                                                                                                                                                                   Similarity
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193
311
358 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                           Zinc-finger;
                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                     18; ZF_RING_1; FALSE_NEG.
89; ZF_RING_2; 1.
                                                                                                                                                                                                                   STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                70
157
283
346
                                                                                                  Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                     40977 MW;
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                                                                                                                                                                                                                                                                                                                                                                                                                           Repeat.
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Pred. No. 4
                                                                                                                                                                                                                                                                                                                                                                              CARD.
RING-TYPE.
                                                                                                                                                                                                                                                                                                                                                                                                     BIR
                                                                                                  Craniata; Vertebrata; Sciurognathi; Muridae;
                                                                                                                                                                                                                   PRT;
                                                                                                                                                                                                                                                                                                                                                                    EB2268FA9A6190A4 CRC64;
                                                                                                                                                                                                                                                                                                                       Mismatches
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                                                                                                                                                         tion update)
protein 1g
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                                                                                                                                                          (Neuronal
                                                                                                                                                                                                                                                                                                                        20;
                                                                                                                                                                                                                                                                                                                                            Length 358;
                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                   Euteleostomi;
; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    apoptosis B.";
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Best Local S
Matches 25
                                                                                                                                                                                                                                                                                                                                             Q9R016; Q9R029; P81703; O09122; O09121; 16-CCT-2001 (Rel. 40, Created) 16-CCT-2001 (Rel. 40, Last sequence update) 15-UN-2002 (Rel. 41, Last annotation update) Baculoviral IAP repeat-containing protein le
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REPEAT
REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the Extender by the European Bioinformatics Institute. There are no restrues by non-profit institutions as long as its content modified and this statement is not removed. Usage by and entities requires a license agreement (See http://www.isb-sorsend an email to license@isb-sib.ch).
                                                                                                                                                                                       "The mouse Naip gene cluster on functional transcripts.";
Mamm. Genome 10:1032-1035(1999).
                                                                                                                                                                                                                                                                                                                      inhibitory protein 5).
BIRCLE OR NAIP5 OR NAIP-RS3.
                                                                                                                                                                                                                                                                                                                                                                                                          BIRE_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE
Scharf J.M., Damron D., Fri
Kunkel L.M., Dietrich W.F.;
"The mouse region syntenic
                                                                                                                                                                                                                         SEQUENCE FROM N.A. MEDLINE-99431676; PubMed-10501978; Huang S., Scharf J.M., Growney J.D.,
                                                                                                                                                                                                                                                                      Mammalia; Eutheria; Rodentia; NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Apoptosis;
REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SMART; SM00238; BIR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MGD; MGI:1858256; Birc1g.
InterPro; IPR001370; BIR.
Pfam; PF00653; BIR; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MGD; MGI:1858256;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; AF242433; AAF82749.1; HSSP; Q13490; 1QBH.
                                              SEQUENCE OF 82-
STRAIN-129/SvJ;
                                                                                                       Endrizzi M., Huang S., Scharf J.M.,
Kunkel L.M., Miller W., Dietrich W.!
"Comparative sequence analysis of the
                                                                                                                                                        STRAIN-129/Sv;
                                                                                                                                                                                                                                                                                               Mus musculus (Mouse).
Eukaryota; Metazoa; (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PROSITE;
                                    MEDLINE-97131520; PubMed-8975718;
                                                                                  Genomics
                                                                                              interval."
                                                                                                                                          MEDLINE-99417674; PubMed-10486205;
                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N
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PS50143; BIR_REPEAT_2;
PS50837; NACHT; 1.
                                                                                 60:137-151(1999).
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1402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Repeat;
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278
                                                         82-168 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                         STANDARD;
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127
227
345
759
                                                                                                                                                                                                                                                                                               Chordata;
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009122; 009121;
                      Frisella
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1 NACHT DOMAIN
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BIR 1.
BIR 2.
BIR 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 134;
Pred. No. 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NACHT
                                                                                                                                                                                                                                                                                     Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                 Chromosome
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                       Α.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C1DFFBA359893E0D CRC64;
                                                                                                          the
                                                                                                                               Kelter A.R., Wirth B.,
                                                                                                                                                                                                                 Endrizzi
mosome 13
                        Bruno
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (See http://www.isb-sib.ch/announce/
                                                                                                          mouse
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.2e-09;
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                       s.,
                                                                                                                                                                                                                                                                                                                                                 (Neuronal apoptosis
                                                                                                                                                                                                                 M.G., Dietrich W.F. encodes several dis
                       Beggs
                                                                                                          human Lgn1/SMA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 1402;
                       A.H.,
                                                                                                                                                                                                                 several distinct
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L outstation -
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Best Local
                                           Mus musculus (Mouse).
Eukaryota; Metazoa; Cl
Mammalla; Eutheria; Rc
NCBI_TaxID=10090;
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                                                                                                          Q9JIB6; P81704; O09122; C09121;
16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Baculoviral IAP repeat-containing protein 1f
inhibitory protein 6).
BIRCIF OR NAIP6 OR NAIP-RS4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           between the Swiss Institute of Bioinformat
the European Bioinformatics Institute. The
use by non-profit institutions as long
modified and this statement is not removed.
entitles requires a license agreement (See
or send an email to license@isb-sib.ch).
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exon 5.
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REPEAT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MGD; MGI:1298220; Bircle.
InterPro; IPR001370; BIR.
Pfam; PF00653; BIR; 3.
SMART; SM00238; BIR; 3.
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-!- SIMILARITY: CONTAINS
 SEQUENCE FROM N.A. MEDLINE=20414747;
                                                                                                                                                                                                                                   BIRF_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Genomics 38:405-417(1996)
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 PubMed=10958627;
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                                                                Chordata;
Rodentia;
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NACHT DOMAIN.
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BIR
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                                                               Craniata; Vertebrata; Sciurognathi; Muridae;
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1.2e-09;
23;
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                                                                Euteleostomi;
Murinae; Mus
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Matches 25
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P41437;
01-NOV-1995 (Rel. 32,
01-NOV-1995 (Rel. 32,
16-OCT-2001 (Rel. 40,
Apoptosis inhibitor 3
IAP3 OR IAP.
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SEQUENCE
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STRAIN-129/SvJ;
MEDLINE-97131520; PubMed-8975718;
Namron D., Frisella A.,
SEQUENCE FROM N.A.
MEDLINE-94187094; PubMed-8139034;
Birnbaum M.J., Clem R.J., Miller L.K.;
"An apoptosis-inhibiting gene from a nuclear encoding a polypeptide with Cys/His sequence J. Virol. 68:2521-2528(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          the European Bioinformatics Institute. Then use by non-profit institutions as long a modified and this statement is not removed. entitles requires a license agreement (See lor send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; AF242431; AAF82751.1; -. EMBL; U66327; AAC52975.1; -. HSSP; Q13490; 1QBH.
                                                                                                               Orgyia pseudotsugata multicapsid polyhedrosis virus (OpMNPV).
Viruses; dsDNA viruses, no RNA stage; Baculoviridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MGD; MGI:1298222; Birc1
InterPro; IPR001370; BI
Pfam; PF00653; BIR; 3.
SMART; SM00238; BIR; 3.
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-!- SIMILARITY: CONTAINS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Endrizzi M.G., Hadinoto V., Growney "Genomic sequence analysis of the mo
                                                                                          Nucleopolyhedrovirus.
NCBI_TaxID=164623;
                                                                                                                                                                                                                                                                                                                                                                                                                    Apoptosis;
                                                                                                                                                                                                                                                                                                                                                                                                                              PROSITE;
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within the Lgnl critical interval
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                                                                                                                                                                                                                                                                  Res. 10:1095-1102(2000).
                                                                                                                                                                                                                                                                                                                Similarity 46.25; Conservative
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PS50143; BIR_REPEAT_2;
PS50837; NACHT; 1.
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278
464
1403
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(Rel. 32, Last sequence update)
(Rel. 40, Last annotation update)
nhibitor 3 (IAP-3).
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127 BIR 1.
227 BIR 2.
345 BIR 3.
759 NACHT.
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NACHT DOMAIN.
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Pred. No. 1.6e
6; Mismatches
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.6e-09;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              as its content
                          polyhedrosis virus
motifs.";
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Best Local S
Matches 23
TISSUE-Eye imaginal disk;
MEDLINE-96128128; PubMed-8548811;
Hay B.A., Wassarman D.A., Rubin G.M.;
"Drosophila homologs of baculovirus in function to block cell death.";
Cell 83:1253-1262(1995).
-1- FUNCTION: APOPTOTIC SUPPRESSOR. ON HID-DEPENDENT CELL DEATH IN THE E)
                                                                                                                                                                                                                                                                                                                                                                                                                                                  IAP1_DROME Q24306;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                          IAPI OR TH.

Drosophila melanogaster (Fruit fly).

Drosophila melanogaster (Fruit fly).

Eukaryota; Metazoa; Arthropoda; Mandibulata;

Insecta; Pterygota; Neoptera; Endopterygota;

Muscomorpha; Ephydroidea; Drosophilidae; Dros

NCBI_TaxID=7227;
                                                                                                                                                                                                                                                                                                                                                                                    01-NOV-1997
16-OCT-2001
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Virology 229:381-399(1997).
-!- FUNCTION: ACTS BY BLOCKING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DROME
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SMART; SM00184; RING; 1
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MEDLINE=97271300; PubMed=9126251;
                                                                                                                                                                       SEQUENCE FROM
                                                                                                                                                                                                                                                                                                                                               protein)
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REPEAT
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InterPro; IPR001841; Znf_ring.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    s SWISS-PROT entry is copyright. It is produced through ween the Swiss Institute of Bioinformatics and the Exercipean Bioinformatics Institute. There are no resti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SIMILARITY: CONTAINS 2 BIR REPEATS.
SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FUNCTION: ACTS BY BLOCKING CELLULAR APOPTOSIS PREVENTING VIRAL STIMULATION OF APOPTOSIS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKLGDSP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   L22564;
U75930;
Q13490;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sequence of the Orgyia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PF00053; BIR; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             . Similarity 42.0
23; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PS01282; BIR_REPEAT_1; 2.
PS50143; BIR_REPEAT_2; 2.
PS00518; ZF_RING_1; FALSE
PS50089; ZF_RING_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            G.F.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Zinc-finger; Repeat.
18 84 BJ
                                                                                                                                                                                                                                                                                                                                                              (Rel. 35,
(Rel. 35,
(Rel. 40,
inhibitor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAB02610.1;
AAC59034.1;
1QBH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Russell
                                                                                                                                                                       N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ΑĄ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STANDARD;
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                                                                                                                                                                                                                                                                                                                                                              Last sequence update)
Last annotation update)
(Inhibitor of apoptosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MW;
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BIR 2.
RING-TYPE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 132; DB 1;
Pred. No. 4.1e-10;
0; Mismatches 2!
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    OVEREXPRESSION EYE.
                                                                                   inhibitor
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                                                                                                                                                                                                                                                      Pancrustacea; Hexapoda;
Diptera; Brachycera;
                                                                                   of
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Best Local S
Matches 23
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Q13075; Q13730; Q99795;
Q13075; Q13730; Q99795;
Q13075; Q13730; Q99795;
Q13075; Q13730; Q99795;
Q13075; Q13730; Q99795;
Q13075; Q13730; Q99795;
Q13770; Q13730; Q13
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InterPro; IPRO01370; BIR.
InterPro; IPRO01841; Znf_xing.
Pfam; PF00097; zf-C3HC4; 1.
Pfam; PF00653; BIR; 2.
SMART; SMAAPPO
                                                                                                                                                                                                                                                                                   TISSUE-Fetal brain;

MEDLINE-95112344; PubMed-7813013;

MEDLINE-95112344; PubMed-7813013;

Roy N., Mahadevan M.S., McLean M., Shutler G., Yaraghi Z.,

Farahini R., Baird S., Besner-Johnston A., Lefebvre C., Kas

Salih M., Aubry H., Tamai K., Guan X., Ioanou P., Crawfor

de Jong P.J., Surh L., Ikeda J., Korneluk R.G., Mackenzie

"The gene for neuronal apoptosis inhibitory protein is par

deleted in individuals with spinal muscular atrophy.";

ceil 80:167-178(1995).
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ZN_FING
SEQUENCE
                                   Xuan J.-Y.
MacKenzie
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SMART; SM00184; RING; 1
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HSSP; Q13490;
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                                                                                                               MEDLINE=98163755;
Chen Q., Baird S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            the European Bioinformatics Institute.
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           n J.-Y., Kang >
.Kenzie A.E.;
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SIMILARITY: CONTAINS 2 BIR REPEATS.
SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SWISS-PROT entry is copyright. It is produced through sen the Swiss Institute of Bioinformatics and the EN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ETARLRTFEAWPRNLKQKPHQLAEAGFFYTGVGDRVRCFSCGGGLMDWNDNDEP
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PS50143; BIR_REPEAT_2;
PS00518; ZF_RING_1; FAI
PS50089; ZF_RING_2; 1.
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438 AA;
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                                                                                                                                                                                                                               N.A.,
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426
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                                                                       Mahadevan
Lefebvre (
                                                                                                                                                                                                                               REVISIONS
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Jones K., Graves T., McPherson J.;
Submitted (JUN-1998) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                             PROSITE; PS01282; BIR_REPEAT_1; PROSITE; PS50143; BIR_REPEAT_2; PROSITE; PS50837; NACHT; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                         InterPro; IPR001370; BIR. Pfam; PF00653; BIR; 3. SMART; SM00238; BIR; 3.
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Anzevino R., Velona I., Brahe C., Scheffer H., van Ommen G.J.B.,
Buys C.H.C.M.;
                                                                              SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Liston P., Roy N., Tamai K., Lefebvre C., Baird S., Cherton-Horvat G., Farahani R., McLean M., Ikeda J., Mackenzie A., Korneluk R.G.; "Suppression of apoptosis in mammalian cells by NAIP and a related family of IAP genes."; Nature 379:349-353(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE-96149249; PubMed-8552191;
Liston P., Roy N., Tamai K., Lefebvre C., Baird
Farahani R., McLean M., Ikeda J., Mackenzie A.,
                                                                                                                                                                                                                                                                                         REPEAT
                                                                                                                                                                                                                                                                                                               Apoptosis;
REPEAT
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Genew; HGNC:7634; BIRC1.
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der Steege G., Draaijers T.G.,
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Genomics 48:121–127(1998).
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SPINAL CORD.

DISEASE: MUTATED OR DELETED FORMS OF NAIF HAVE BEEN FOUND IN INDIVIDUALS WITH SPINAL MUSCULAR ATROPHY TYPE I (SMA TYPE 1).

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SIMILARITY: CONTAINS 3 BIR REPEATS.
SIMILARITY: CONTAINS 1 NACHT DOMAIN.
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U80017; AAC52047.1;
U21913; AAA64504.1;
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M -> V (IN REF. 3).
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Search completed: May 5, 2003, 16:02:42 Job time : 4.28111 secs

GenCore version 5.1.4_p5_4578 Copyright (c) 1993 - 2003 Compugen Ltd.

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ALIGNMENTS

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Query Match
Matches
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Pfam; PF00659; CARD; 1.

Pfam; PF00097; zf-C3HC4; 1.

SMART; SM00238; BIR; 3.

SMART; SM00114; CARD; 1.

SMART; SM00114; CARD; 1.

SMART; SM00184; RING; 1.

PROSITE; PS01282; BIR_REPEAT_1; 2.

PROSITE; PS50143; BIR_REPEAT_2; 3.

PROSITE; PS50209; CARD; 1.

Zinc-finger.
                                                                                                                                                                                                                                                                                                                                                                                                                               01-MAR-2001 (TrEMBLrel. 16, Created)
01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
Inhibitor of apoptosis protein 1.
Rattus norvegicus (Rat).
                                                                                                                                                                                                             HOLCIK M., Lefebvre C.A., Hicks K., Korneluk R.G.;

"Cloning and Characterization of the Rat Homologs of the Apoptosis Protein 1, 2, and 3 Genes."

Submitted (SEP-199) to the EMBL/GenBank/DDBJ databases.

-- SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.

EMBL; AF183430; AAG22970.1; -.

HSSP; Q13490; 1QBH.

InterPro; IPR001370; BIR.

InterPro; IPR001315; CARD.

InterPro; IPR001315; CARD.

InterPro; IPR001315; Znf_ring.
                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Métazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rati
NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q9ESE9;
                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
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             Local
             Similarity
                                                       602
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
                                                       Ŗ,
                                                       67326 MW;
             97.18;
96.48;
1;
             Score 298; DB 11
Pred. No. 1.2e-31
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                                                       CC91385EEA62DE5A CRC64;
Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            602
                            DB 11;
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                           Length 602;
 Indels
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D Q9Q2C6;

C Q9Q2C6;

OT 01-MAY-2000 (TrEMBLrel. 13, Created)

DT 01-DEC-2001 (TrEMBLrel. 13, Last sequence update)

DT 01-DEC-2001 (TrEMBLrel. 19, Last annotation update)

DT 01-DEC-2001 (TremBLrel. 19, Last annotation update)

DE Inhibitor of apoptosis protein 2.

OS Rattus norvegicus (Rat).

OS Rattus norvegicus (Rat).

OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; El
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Best Local
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01-MAR-2001
01-JUN-2002
                        Dong Z., Denton M., Gu S.M., Saikumar P., Venkatachalam "Cloning of cDNA for rat inhibitor of apoptosis protein Submitted (SEP-1999) to the EMBL/GenBank/DDBJ databases.-i-SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER. EMBL; AF190020; AAF04585.1; -. HSSP; Q13490; 1QBH.
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SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BQUENCE FROM N.A.

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pfam;
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Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ol-MAR-2001 (TrEMBLrel 16, Creat
01-MAR-2001 (TrEMBLrel 16, Last
01-JUN-2002 (TrEMBLrel 21, Last
101-JUN-2002 (TrEMBLrel 2).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q9ESE8
                                                                                                                                                                                                                           TISSUE-KIDNEY;
                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxID=10116;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      InterPro;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCGGLMLDNWKLGDSP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repro; ipr001370; BIR.
repro; ipr001315; CARD;
repro; ipr001841; Znf_rin;
repr0653; BIR; 3.
repr0653; BIR; 3.
repr06619; CARD; 1.
repr0697; zf-C3HC4; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CELYRMSTYSAFPRGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKQGDSP 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SM00238; BIR; 3.
SM00114; CARD; 1.
SM00184; RING; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
IPR001370;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              589
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AA;
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Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       66750 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    94.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Znt_ring.
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Pred. No. 1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B4F7089BD7CD285B CRC64;
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1.1e-30;
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                                                                                                                                                                                                                                                                                                                                                       Euteleostomi; Murinae; Rat
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RAP PS:
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Best Local (
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Best Local
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                                                              01-MAR-2001 (TrEMBLrel. 16,
01-DEC-2001 (TrEMBLrel. 19,
Apoptosis inhibitor ch-IAP1
Gallus gallus (Chicker)
                                                                                   Q9DDN2;
01-MAR-2001
01-MAR-2001
01-DEC-2001
                                                    Eukaryota; Metayon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pfam; PF00619; CARD; 1.
Pfam; PF00097; zf-C3HC4; 1.
SMART; SM001238; BIR; 3.
SMART; SM00114; CARD; 1.
SMART; SM00184; RING; 1.
                                                                                                                                                                                                                                            Pfam; PF00653; BIR; 3.
Pfam; PF00653; BIR; 3.
PROSITE; PS01282; BIR_REPEAT_1; UNKNOWN_3.
PROSITE; PS50143; BIR_REPEAT_2; 3.
PROSITE; PS50143; BIR_REPEAT_2; 3.
SEQUENCE 374 AA; 41915 MW; 1D2B54C32D7
                                                                                                                                                                                                                                                                                                       Strausberg R.;
Submitted (JUL-2001) to the
EMBL; BC011338; AAH11338.1;
                                                                                                                                                                                                                                                                                                                                                                                                 01-DEC-2001 (TrEMBLrel.
01-DEC-2001 (TrEMBLrel.
01-JUN-2002 (TrEMBLrel.
Similar to baculoviral I
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SEQUENCE FROM N. Pendleton C.N.,
                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa;
Mammalia; Eutheria;
                           NCBI_TaxID=9031;
                                                                                                                         Q9DDN2
                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                          BIRC2
                                                                                                                                                                                                                                                                                                                                                                                                                                        Q921NO;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Zinc-finger
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                                               Archosauria;
                                                                                                                                                                                                                                                                                     MGD; MGI:1197007; B11
InterPro; IPR001370;
                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=10090;
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InterPro; IPR001841;
Pfam; PF00653; BIR;
                                                                                                                                                                                                                  Local
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                                                                                                                                                                      52;
                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                               Metazoa;
la; Aves; l
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         589 AA;
                                                                                                                         PRELIMINARY;
                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRELIMINARY;
 Bargmann
                                                                                                                                                                                                                                                                                              Birc2
                                               Chordata; (
                                                                                                                                                                                                                                                                                                                                                              Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          66777 MW;
                                                                                                                                                                                                                                                                                     BIR.
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W.J.,
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Last annotation updat
(Fragment).
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                                                                                                                                                                                                           Score 281; DB 11,
Pred. No. 1.4e-29,
1; Mismatches '
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                                               Craniata; Ver; Galliformes;
                                                                                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                              Craniata; Veri
Sciurognathi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRT;
 Varadarajan
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                                               Vertebrata; Euteleostomi;
mes; Phasianidae; Phasianinae;
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thi; Muridae;
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; Murinae; Mus
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                                  Pfam; PF00653; BIR; 3.
Pfam; PF00659; CARD; 1.
Pfam; PF00097; zf-C3HC4; 1.
SMART; SM00238; BIR; 3.
SMART; SM00114; CARD; 1.
SMART; SM00184; RING; 1.
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057319;
                                                                                                                                                                                                                                                            -1- TISSUE SPECIFICITY: EXPRESSED AT RELATIVELY HIGH LEVELS IN SPLEEN, THYMUS, BURSA, INTESTINE, AND LUNG, AND AT VERY LOW IN TESTIS, BRAIN, AND SKELETAL MUSCLE.
-1- INDUCTION: INDUCED DURING THE V-REL-MEDIATED TRANSFORMATION
                                                                                                                                                                                                                                                                                                                                                        STRAIN-WHITE LEGHORN, TISSUE-EMBRYONIC FIBROBLAST;
MEDLINE-9803801; PubMed-9372964;
YOU M., Ku p.-T., Hrdlickova R., Bose H.R. Jr.;
"ch-TAP1, a member of the inhibitor-of-apoptosis protein family,
mediator of the antiapoptotic activity of the v-Rel oncoprotein.
Mol. Cell. Biol. 17,7328-7341(1997).
-i- FUNCTION: SUPPRESSOR OF APOPTOSIS IN ONCOFROTEIN V-REL-TRANS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gallus gallus (Chicken).
Gallus gallus (Chicken).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
PROSITE; PS01282; BIR_REPEAT_1; PROSITE; PS50143; BIR_REPEAT_2; PROSITE; PS50209; CARD; 1.
                                                                                                                   InterPro; IPR001370; BIR. InterPro; IPR001315; CARD. InterPro; IPR001841; Znf_I
                                                                                                                                                        APOPTOSIS PROTEIN REPEAT).
-1- SIMILARITY: CONTAINS A C3HC4-CLASS ZINC FINGER EMBL; AF008592; AAB88044.1;
HSSP; Q13490; 1QBH.
                                                                                                                                                                                                            -i- DOMAIN: THE RING FINGER IS IMPORTANT
-i- SIMILARITY: MEMBER OF THE IAP FAMILY.
-i- SIMILARITY: CONTAINS 3 BIR DOMAINS (F
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01-JUN-1998 (TrEMBLrel. 06, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
Inhibitor of apoptosis PROTEIN 1 (IAP) (Inhibitor o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PROSITE; PS01282; BIR_REPEAT_1; PROSITE; PS50143; BIR_REPEAT_2; NON_TER 324 324
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Pred. No. '
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4.7e-25;
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Best Local :
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SMART; SM00114; CARD; 1.

SMART; SM00114; RING; 1.

SMART; SM00184; RING; 1.

PROSITE; PS01282; BIR_REPEAT_1; UI

PROSITE; PS50143; BIR_REPEAT_2; 3.

PROSITE; PS50209; CARD; 1.

PROSITE; PS50209; CARD; 1.

PROSITE; PS50209; CARD; 1.

SEQUENCE 628 AA; 70098 MW; 5B/
Q8UVF8;
Q8UVF8;
01-MAR-2002
01-MAR-2002
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REPEAT
REPEAT
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ZN_FING
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Submitted (NOV-2001) to the
EMBL; AF442500; AAL33679.1;
                                                                                                                                                                                                                                                                                                                                                                                                                  Brachydanio rerio (Zebrafish) (Zebra danio).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Cypriniformes;
Cyprinidae; Danio.
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InterPro; IPR001315;
InterPro; IPR001841;
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InterPro; IPR001841; Znf_ring.
Pfam; PP00653; BIR; 3.
Pfam; PP00097; zf-C3HC4; 1.
SMART; SM00238; BIR; 3.
SMART; SM00184; RING; 1.
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Q8UWH2;
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Pfam; PF00097; zf-C3HC4; 1.
SMART; SM00238; BIR; 3.
SMART; SM00184; RING; 1.
PROSITE; PS01282; BIR_REPEAT_1; UNKNOWN_2.
PROSITE; PS050183; BIR_REPEAT_2; 3.
PROSITE; PS50143; BIR_REPEAT_2; 3.
SEQUENCE 493 AA; 55251 MW; 030A9F56CB6
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Cypriniforma
Cyprinidae; Danio.
                                                                                                                                                                                                                                                                                               Inohara N., Nunez G.;
Submitted (OCT-2001) to the
EMBL; AF439767; AAL32047.1;
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SEQUENCE FROM N.A.
Johnson
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A. MEDLINE-20373792;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vermebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gallus gallus (Chicken).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=9031;
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29; Conserv
                                                                                      PS50143; BIR_REPEAT_2;
PS50089; ZF_RING_2; 1.
405 AA; 45564 MW; 1
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(TrEMBLrel. 20, Last sequence update)
(TrEMBLrel. 21, Last annotation update)
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    Conservative
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                     50.5%;
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                       Score 155;
Pred. No. 1.
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  Mismatches
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                       DB 13;
.6e-12;
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.es 17;
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                                             13;
                                                                                             CRC64;
                                        Length 405;
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RESULT 11
Q9EQ05
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Q9ESF0
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Best Local
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        HSSP; Q13490; 1QBH.
InterPro; IPR001370; BIR.
InterPro; IPR001841; Znf_rin;
Pfam; PF00653; BIR; 3.
Pfam; PF00097; zf-C3HC4; 1.
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Pfam; PF00097; zf-C3HC4; 1.
SMART; SM00238; BIR; 3.
SMART; SM00184; RING; 1.
SMOSITE; PS01282; BIR_REPEAT_1; 2
PROSITE; PS01282; BIR_REPEAT_2; 3
PROSITE; PS0143; BIR_REPEAT_2; 3
                                                                EMBL;
HSSP;
                                                                        STRAIN-WISTAR; TISSUE-OVARY;
Lareu R.R., Bradley C.K., Lacher M., Friis R.R., Dharmar
"Cloning, characterization and regulation of an inhibito
protein in the rat corpus luteum.";
Submitted (SEP-2000) to the EMBL/GenBank/DDBJ databases.
-!-SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
EMBL; AF304333; AAG41192.1; -.
                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Rodentia; NCBI_TaxID=10116;
                                                                                                                                                                                                                                               01-MAR-2001 (TERMBLIE). 16, Created)
01-MAR-2001 (TERMBLIE). 16, Last sequence up
01-UN-2002 (TERMBLIE). 21, Last annotation
Inhibitor of apoptosis protein 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Holcik M., Lefebvre C.A., Hicks K., Korneluk R.G.; "Cloning and Characterization of the Rat Homologs of the "Cloning and Characterization Genes."; Apoptosis Protein 1, 2, and 3 Genes."; Submitted (SEP-1999) to the EMBL/GenBank/DDBJ databases
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                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Zinc-finger
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Inhibitor of apoptosis protein 3.
Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleosto
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-MAR-2001
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                                                                                                                                                                                                                                    Rattus norvegicus
                                                                                                                                                                                                                                                                                                       Q9EQ05;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                    PRELIMINARY;
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                                                                                                                                                                                                                                     (Rat)
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                                     Znf_ring
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Pred. No. 5e-12;
                                                                                                                                                                                                          Craniata; Vertebrata; 1
Sciurognathi; Muridae;
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                                                                                                                               inhibitor
                                                                                                                                            Dharmarajan
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                                                                                                                                                                                                           Euteleostomi;
; Murinae; Rat
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                                                                                                                               apoptosis
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Best Local (
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01-MAR-2001
01-JUN-2002
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01-MAR-2001 (TrEMBLrel. 16, 01-MAR-2001 (TrEMBLrel. 21, 01-JUN-2002 (TrEMBLrel. 21, 01-JUN-2002 (TremBrel. 21, 01-JUN-2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Lareu R.R., Bradley C.K., Lacher M., Friis R.N., Dharmar "Cloning, characterization and regulation of an inhibito protein in the rat corpus luteum." Submitted (SEP-2000) to the EMBL/GenBank/DDBJ databases.-I- SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINCER.
EMBL, AF304334; AAG41193.1; -.
                                                                                 Viruses; dsDNA vi
Entomopoxvirus B.
NCBI_TaxID=28321;
                                                                                                                                                                                                                                                                                                                                                                                  Q9EN27
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SMART; SM00184; RING;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pfam; PF00053; BIR; 3.
Pfam; PF00097; zf-C3HC4; 1.
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PROSITE; PS01282; BIR_REPEAT_1;
PROSITE; PS50143; BIR_REPEAT_2;
Zinc-finger.
                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                      AMV021.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HSSP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRAIN-WISTAR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
   MEDLINE=20396580;
                                                                                                                                                                                Amsacta moorei
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a; Chordata;
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Pred. No. 5.1e
8; Mismatches
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InterPro;
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SMART; SM00238; BIR; 1.
SMART; SM00184; RING; 1.
SP001184; BIR_REPEAT_1;
PROSITE; PS01282; BIR_REPEAT_2;
SEQUENCE 264 AA; 30547 MW; 2
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EMBL; AF221082; AAF35319.1; -
HSSP; Q13490; 1QBH.
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"Genetic variation among chicken
                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=21158006; PubMed=11261557; Zhou H., Liu W., Lamont S.J.;
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mes; Phasianidae; Phasiani
                                                                         DB 13;
1.9e-11;
les 20;
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RESULT Q9IA69

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Search completed: May 5, 2003, 16:06:24 
Job time: 14.4332 secs
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                                                                                                                                                                                                                                                                                                                                                                                                                                          POUIT. Sci. 80:264-288(2001).
EMBL; AF221083; AAF35320.1; -.
HSSP, O13490; 10BH.
InterPro; IPR001370; BIR.
Pfam; PF00563; BIR; 2.
SMART; SM00238; BIR; 2.
PROSITE; PS01282; BIR_REPEAT_1; 2.
PROSITE; PS50143; BIR_REPEAT_2; 2.
NON_TER 17 197
SEQUENCE 197 AA; 22602 MW; D7923
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09IA69;
01-OCT-2000 (TrEMBLrel. 15, Created)
01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
101-DEC-2001 (TrEMBLrel. 19, Last sequence update)
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101-DEC-2000 (TrEMBLrel. 15, Last sequence update)
101-DEC-2001 (TrEMBLrel. 19, Last annotation update)
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101-DEC-2001 (TrEMBLrel
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STRAIN=BREED FAYOUMI; TISSUE-SPLEEN;
MEDLINE-21158006; PubMed-11261557;
Zhou H., Liu W., Lamont S.J.;
"Genetic variation among chicken lines and mammalian species in specific genes.";
                                                                                                                                     NCBI_TaxID=9031;
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197 AA; 22602 MW; D7923DABCF623E1A CRC64;
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GenCore version 5.1.4_p5_4578 Copyright (c) 1993 - 2003 Compugen Ltd.

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Result
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Maximum Match 100%
Listing first 45 summaries
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length: 2000000000
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295
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     /cgn2_6/ptodata/1/iaa/5A_COMB.pep:*
/cgn2_6/ptodata/1/iaa/5B_COMB.pep:*
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/cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
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432.866 Million cell updates/sec
   PCT US96-12860-9
PCT US95-0522A-2
US-08-569-749-2
US-08-511-485-2
US-08-511-485-8
US-08-511-485-8
US-09-212-971-8
US-08-511-485-6
US-08-617-053A-8
US-09-617-053A-8
US-09-617-053A-8
US-09-617-053A-6
US-08-800-929A-6
US-08-800-929A-1
US-08-800-929A-1
US-08-800-929A-14
US-09-617-053A-14
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PCT-US96-12660-14
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           Sequence 8, Appli
Sequence 8, Appli
Sequence 10, Appl
Sequence 10, Appl
Sequence 6, Appli
Sequence 6, Appli
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48 48 Query Match
Best Local Similarity 100
Matches 48; Conservative

0.0%;

Score 295; DB 4; Pred. No. 3.7e-30; Mismatches 0;

Length 48; Indels

0;

Gaps

0

US-08-569-749-9 Sequence 9, Application US/08569749 Patent Mo6.87557. APPLICANT: Rothe, Mike APPLICANT: Roeddel, David V TITLE OF INVENTION: INHIBITORS OF APOPTOSIS NUMBER OF SEQUENCES: 14 CORRESPONDENCE ADDRESS: ADDRESSEE: FLEHR, HOHBACH, TEST, ALBRITTON & HERBERT STREET: 4 Embarcadero Center, Suite 3400 CITY: San Francisco STATE: California COUNTRY: USA ZIP: 94111 COMPUTER READABLE FORM: MEDJUM TYPE: Floppy disk COMPUTER READABLE FORM: MEDJUM TYPE: Floppy disk COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: Patentin Release \$1.0, Version \$1.30 CURRENT APPLICATION DATA: APPLICATION UNUBER: 24.774 REGISTRATION UNUBER: 24.774 REGISTRATION SUMBER: 24.774 REFERENCE/DOCKET NUMBER: A-62464/DJB TELECOMMUNICATION INFORMATION: TELEPAX: (415)781-1989 INFORMATION FOR SEQ ID NO: 9: SEQUENCE CHARACTERISTICS: LENGTH: 48 amino acids TYPE: amino acid TYPE: amino acid TYPE: amino acid TYPE: amino acid TYPE: STANDEDNESS: single TOPOLOGY: linear MOLECULE TYPE: protein	28 268 90.8 600 4 US-09-617-053A-12 Sequence 12, Appl 30 230 78.0 50 4 US-08-975-080-31 Sequence 31, Appl 30 230 78.0 50 4 US-08-975-080-22 Sequence 22, Appl 31 230 78.0 50 4 US-08-975-080-30 Sequence 30, Appl 31 230 78.0 50 4 US-08-975-080-30 Sequence 23, Appl 32 198 67:1 268 3 US-08-836-134-22 Sequence 24, Appl 36 182 61.7 68 2 US-08-975-080-21 Sequence 27, Appl 36 182 61.7 275 2 US-08-911-485-29 Sequence 27, Appl 37 182 61.7 275 3 US-08-836-134-21 Sequence 21, Appl 40 178 60.3 1151 3 US-08-836-134-21 Sequence 21, Appl 40 178 60.3 1151 3 US-08-836-134-21 Sequence 21, Appl 40 178 60.3 1232 3 US-08-836-134-23 Sequence 21, Appl 40 178 60.3 1232 3 US-08-836-134-23 Sequence 21, Appl 40 178 60.3 1232 3 US-08-836-134-23 Sequence 23, Appl 42 178 60.3 1232 3 US-08-836-134-2 Sequence 24, Appl 44 174 59.0 66 2 US-08-511-485-25 Sequence 25, Appl 45 174 59.0 236 4 US-09-239-867-4 Sequence 25, Appl 45 174 59.0 236 4 US-09-239-867-4 Sequence 4, Appl 45 174 59.0 236 4 US-09-239-867-4
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                                                                                                                                                                                                                                                                                                                                      Sequence 2, Application PC/TUS9505922A GENERAL INFORMATION:
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Best Local Similarity
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OF TWARE: WORD PERFECT 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/TTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INFORMATION FOR SEQ ID NO:
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MEDIUM TYPE: Floppy disk
                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 INCH DISKETTE
                                                                                                                                                                                                                                                                   NUMBER OF SEQUENCES: 8
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                     TITLE OF
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MOLECULE TYPE: protein
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                                                                                                                                                                                                               ADDRESSEE: CARELLA, BYRNE, BAIN, GILFILLAN, ADDRESSEE: CECCHI, STEWART & OLSTEIN STREET: 6 BECKER FARM ROAD
                                                                                                  COMPUTER:
                                                                                                                                                       COUNTRY: U
ZIP: 07068
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TYPE: amino acid
TYPE: single
STRANDEDNESS: single
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REGISTRATION NUMBER: 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: PCT/US96/12860 FILING DATE: 06 AUG 1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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                                                                                                                                                                     USA
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                                                                                                IBM PS/2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%; Score 295; DB 5; 100.0%; Pred. No. 3.7e-30;
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Query Match
Best Local Similarity
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Best Local Similarity
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                                                                                                                                                                TELEFAX: (415)398-3249 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
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                                                                                                                                 SEQUENCE CHARACTERISTICS:
LENGTH: 618 amino acid
                                                                                                                                                                                                                                                                                                                                                   SOFTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Rothe, Mike
APPLICANT: Goeddel, David V
TITLE OF INVENTION: INHIBITORS OF APOPTOSIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE/DOCKET NUMBER: 32
TELECOMMUNICATION INFORMATION:
TELEPHONE: 201-994-1700
                                                                                                                                                                                                               TELECOMMUNICATION INFORMATION
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CORRESPONDENCE ADDRESS:
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APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 107 PEQLASAGFYYVGRNDDVKCFCCDGGLRCWESGDDPWVEHAKWFPRCE 154
                                                                               TOPOLOGY:
                                                                                               STRANDEDNESS:
                                                                                                                                                                                                                 REFERENCE/DOCKET NUMBER: A-1
LECOMMUNICATION
                                                                                                                                                                                                                                                                                                                                                                                COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
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                                                                                                                                                                                               TELEPHONE:
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                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
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 Score 295; DB 4;
Pred. No. 6e-29;
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                 Length 618;
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NUMBER OF SEQ ID NOS: 38
SOFTWARE: PatentIn Ver. 2
SEQ ID NO 29
SEQ ID NO 29
LENGTH: 618
TYPE: PRT
ORGANISM: Homo sapiens
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; Sequence 29, Appl
; Patent No. 634857
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APPLICANT: Koseki, Takeyoshi
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR IDENTIFYING APOPTOSIS
TITLE OF INVENTION: SIGNALING PATHWAY INHIBITORS AND ACTIVATORS
FILE REFERENCE: UM-03333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION NUMBER: US/09/069,023A CURRENT FILING DATE: 1998-04-27;
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                    INFORMATION FOR SEQ ID NO:
                                                                  REGISTRATION NUMBER: 24,774
REFERENCE/DOCKET NUMBER: A-
TELECOMMUNICATION INFORMATION:
   SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                   PRIOR APPLICATION DATA:
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                                                                                                                                                                                                                                                                                                                      MEDIUM TYPE: Floppy
                                                                                                                                    ATTORNEY/AGENT INFORMATION:
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COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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                                                                                                                                                     CLASSIFICATION:
                                                                                                                                                                                                      CLASSIFICATION
                                                                                                                                                                     APPLICATION NUMBER: U.S. Serial Nos. 08/512,946 & 08/569,749
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                                                                                                                  Brezner, David J
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Pred. No. 6e-29;
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; MOLECULE TYPE:
US-08-511-485-27
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                                  RESULT 8
US-08-511-485-8
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Sequence 8, Application US/08511485 Patent No. 5919912
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Matches
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Best Local
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Best Local Similarity
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APPLICANT: Korneluk, Robert G.
APPLICANT: Mackenzle, Alexander E.
APPLICANT: Baird, Stephen
APPLICANT: Baird, Stephen
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TELEX: 200154
INFORMATION FOR SEQ ID NO:
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STRANDEDNESS: sinc
TOPOLOGY: linear
MOLECULE TYPE: prote
                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 04-AUG-1995
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: Clark, paul T
REGISTRATION NUMBER: 30,162
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TELECOMMUNICATION INFORMATION:
TELEPHONE: 617/542-5070
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OPERATING SYSTEM: PC-DOS/MS-DOS
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ZIP: 02110-2804
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                                                                                                                                                                          similarity 97,989 Pred. No. 1.7e-28;
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Pred. No. 6e-29;
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Matches Query Match US-09-069-023-29

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PCT-US96-12860-2

STREET:

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Korneluk, Robert G.

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CURRENT APPLICATION NUMBER: US/09/212,971B CURRENT FILING DATE: 1998-12-16 EARLIER APPLICATION NUMBER: '60/017,354 EARLIER FILING DATE: 1996-04-26 EARLIER FILING DATE: 1996-11-14 EARLIER APPLICATION NUMBER: 06/030,590 EARLIER FILING DATE: 1996-11-14 EARLIER APPLICATION NUMBER: 08/800,929 EARLIER FILING DATE: 1997-02-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                  APPLICANT: Tsang, Benjamin K
APPLICANT: Pratt, Christine
                                                                                                                                                                                                                                                    APPLICANT: Liston, APPLICANT: Baird,
                                                                                                                                                                                                                                                                                     \PPLICANT: MacKenzie,
                                                                                                                                                     TILE OF INVENTION: DETECTION AND MODULATION OF TAPS AND TILE OF INVENTION: NAIP FOR THE DIAGNOSIS AND TREATMENT TILE OF INVENTION: DISEASE
                                                                                                                                                                                                                                                                                                     PPLICANT: Korneluk, Robert G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY: bo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE/DOCKET NUMBER: 07
TELECOMMUNICATION INFORMATION:
TELEPHONE: 617/542-5070
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CURRENT APPLICATION DATA:
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MEDIUM TYPE: Floppy disk
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                                                                                                                                                                                                                                                                                                                                                                                                                                                    287
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: amino acid
STRANDEDNESS: not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 PEQLASAGFYYVGRNDDVKCFCCDGGLRCWESGDDPWVEHAKWFPRCE 48
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
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                                                                                                                                                                                                                                                                                                                                                         Application US/09212971B
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                                                                                                                                                                                                                                                                                   Alexander E
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Pred. No. 1
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.9e-27;
                                                                                                                                                                             TREATMENT OF PROLIFERATIVE
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; ORGANISM: Homo sapiens
US-09-212-971-8
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                                                          US-08-800-929A-8
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CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 60/030,590
FILING DATE: 14-NOV-1996
APPLICATION NUMBER: 60/017,354
APPLICATION NUMBER: 50/017,354
TOTAL DATE: 26-APR-1996
                Query Match
Best Local
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LENGTH: 618
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Best Local
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                                                                                                                                         SEQUENCE CHARACTERISTICS:
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                                                                                                                                                                                     REGISTRATION NUMBER: 07
REFERENCE/DOCKET NUMBER: 07
TELECOMMUNICATION INFORMATION:
TELEPHONE: 617-428-0200
TELEFAX: 617-428-7045
                                                                                                                                                                                                                                                             FILING DATE: 26-APR-1996
ATTORNEY/AGENT INFORMATION:
NAME: Bieker-Brady, Kris
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
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TITLE OF INVENTION:
                                                                       MOLECULE TYPE:
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OPERATING SYSTEM:
SOFTWARE: FastSE
                                                                                  STRANDEDNESS:
TOPOLOGY: 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US/01 FILING DATE: 13-FEB-1997
              Local
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                                                                                                                            ENGTH:
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 Similarity 97.9
47; Conservative
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                                                                                                                             618 amino acids
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Korneluk, Robert
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t, Christine
              95.9%;
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DISEASE
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97.98;
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                                                                                                                                                                                                                                07891/009001
Score 283; DB 4; L
Pred. No. 1.9e-27;
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                             Length 618;
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 Indels
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US-08-569-749-10
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Description US/08569749 Patent No. 6187557
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH: 618
TYPE: PRT
ORGANISM: Homo sapiens
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[NFORMATION FOR
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                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Rothe, Mike
APPLICANT: Goeddel, David V
TITLE OF INVENTION: INHIBITORS OF APOPTOSIS
NUMBER OF SEQUENCES: 14
                             REFERENCE/DOCKET NUMBER: A-
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415)781-1989
                                                                                                                                                                                       SOFTWARE: PatentIn Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                          COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                              ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS
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                                                                               NAME: Brezner, David J. REGISTRATION NUMBER: 24,774
                                                                                                                                                                                                                  COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                 STREET: 4 Embarcadero Center, Suite 3400 CITY: San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Match 95.9%;
Local Similarity 97.9%;
                                                                                                                                      CLASSIFICATION: 514
                                                                                                                                                        FILING DATE:
                                                                                                                                                                       APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                             COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE:
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                                                                                                                                                                                                                                                                                                                                 California
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                                                                                                                                                                                                                                                                                                                 USA
                (415)
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                                                                                                                                                                                                                                                          Floppy disk
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2000-07-14
ARR: US 08/800,929
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                                                                   A-62464/DJB
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Pred. No. 1.9e-27;
D; Mismatches :
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                                                                                                                                                                                                         Version #1.30
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Best Local Similarity
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                RESULT 14
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; MOLECULE TYPE:
PCT-US96-12860-10
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PCT-US96-12860-10
US-08-511-485-26
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                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION DATA:
APPLICATION NUMBER: U.S.
CLASSIFICATION:
                                                                                                                                                                                                                                                              SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                  ATTORNEY/AGENT INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
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                                                                                                                                                                                                                                                                                                                                       REGISTRATION NUMBER: 24,774
REFERENCE/DOCKET NUMBER: A-62464/DJB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OPERATING SYSTEM:
                                                                                                                                                                                                                    STRANDEDNESS:
                                                                                                                                                                                                                                               LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                             CLASSIFICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CITY: San Francisco
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                                                                                                                   Conservative
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IBM PC compatible
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93.8%;
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                                                                                                                 Score 282; DB Pred. No. 1.6e 2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                               Serial Nos. 08/512,946 & 08/569,749
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Pred. No. 1.6e-28;
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                                                                                                                                 DB 5;
L.6e-28;
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Sequence 26, Application Patent No. 5919912 GENERAL INFORMATION:

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; TYPE: amino acid; ; STRANDEDNESS: nc; TOPOLOGY; both; MOLECULE TYPE: prc US-08-511-485-26
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US-08-511-485-6
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Best Local Similarity 93.8
Conservative
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INFORMATION FOR SEQ ID NO: 2
SEQUENCE CHARACTERISTICS:
LENGTH: 68 amino acids
TYPE: amino acid
GTBANDEDNUSCS: acid
                                                                                                                                                                                                                                                                                                                                                                                 Sequence 6, Application US/08511485 Patent No. 5919912
                                COUNTRY: USA
ZIP: 02110-2804
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
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NAME: CLArk, Paul T.
REGISTRATION NUMBER: 30,162
REFERENCE/DOCKET NUMBER: 0754
TELECOMMUNICATION INFORMATION:
TELEPHONE: 61/542-5070
                                                                                                                                                                                                                                                                                                         APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: Patentin Rclease #1.0, CURRENT APPLICATION DATA:
               SOFTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ZIP: 02110-2804
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
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CORRESPONDENCE ADDRESS:
ADDRESSEE: Fish & Richardson P.C.
                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS:
ADDRESSEE: Fish & Ri
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
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                                                                                                                                                                                                                                                      TUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                       TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEPHONE: 617/542-8906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US/01
FILING DATE: 04-AUG-1995
CLASSIFICATION: 514
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APPLICATION NUMBER:
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225 Franklin Street
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Mackenzie, Alexande
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Mackenzie, Alexander E.
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; TYPE: amino acid
; STRANDEDNESS: not
; TOPOLOGY: both
OLECULE TYPE: prote
US-08-511-485-6
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                                                 Query Match
Best Local Similarity
Matches 45; Conserv
                                                                                                                                                                          INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                           TELECOMMUNICATION INFORMATION: TELEPHONE: 617/542-5070
                                                                                                                                                                                                                                                                                      ATTORNEY/AGENT INFORMATION:
TELEPHONE: 617/542-8906
                                                                                                                                                                                                                                                               NAME: Clark, Paul T. REGISTRATION NUMBER: 30,162
                                                                                                                                                                                                                                                                                                      CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                     REFERENCE/DOCKET NUMBER:
                                                                                                                                                              LENGTH:
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                                                                                                                                                             604 amino acids
                                                  Conservative
                                                                                                              protein
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                                                             Score 282; DB 2;
Pred. No. 2.4e-27;
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                                                    Mismatches
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Search completed: May 5, 2003, 16:09:12 Job time : 4.26267 secs

GenCore version 5.1.4_p5_4578 Copyright (c) 1993 - 2003 Compugen Ltd.

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Title:
Perfect score:
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/SIDS2/gcgdata/geneseq/geneseqp·emb1/AA1986.DAT:*
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	48 AA.	Protein;	standard;	ULT 1 13551 AAW13551	2 19
	ALIGNMENTS				
Human apoptosis in	AAY09539	403 2	60.3	17	
	AAY14079	403	60.3		
Neuronal apoptosis	AAW20032		50. 	42 178 178	
Human apoptosis in	AAY09540	295	60.3		
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3	AAR98217	232 1	60.3	9 17	
AmEPV baculovirus-	ABB09488			8 18	
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	AAY69182	N		4 19	
A human proliferat	AAY84907	N	•	3 19	
Survivin-like prot	AA014947	N	•	2 19	
	AAB31478	N		1 19	
	AAO14945	N		0 19	
Survivin-like prot	AA014946	N I	66.1	9 19	
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C-IAP2. H	354	604 18	•	12 282	
Human apoptosis in	AAW19582	604 18	٠	28	

AAAWI AAAA AAAWI AAAWI AAAWI AAAWI AAAWI AAAWI AAAWI AAAWI AAAWI AAAWI AAAAWI AAAWI AAWI AAAWI AAAWI AAAWI AAAWI AAAWI AAAWI AAAWI AAAWI AAAAWI AAAWI AAAAWI AAAAWI AAAAWI AAAAWI AAAAWI AAAAWI AAAAWI AAAAWI AAAA IAP; inhibitor; apoptosis; RING finger domain; restinosis; myocardial infarction; nephritis; HIV. 08-DEC-1995; 08-AUG-1995; 06-AUG-1996; WPI; 1997-154209/14. Goeddel DV, (TULA-) TULARIK INC. 20-FEB-1997. WO9706182-A1 Homo sapiens Human c-IAP1 repeat 3. Rothe M; 95US-0569749. 95US-0512946. 96WO-US12860

Nucleic acids encoding cellular inhibitor of apoptosis proteins useful for apoptosis regulation in cells to reduce or increase apoptosis and for pharmacological screening.

screening

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Best I
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The nucleic acid is used for recombinant prodn. of human cellular inhibitor of apoptosis protein which modulates apoptosis regulation. The nucleic acids are useful in therapies where increased cell-specific apoptosis is desired, e.g. in restinosis, increased cell-specific apoptosis is desired, e.g. in restinosis,
                     septic shock, as an antiviral defence mechanism, and for preventing cell death during strokes or trauma. Its amino acid sequence was deduced from a cDNA clone (AAT43709) that can be observed to the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract
                                                                           useful for treating septic shock, as an
                                                                                                                                                                                                                           Polynucleotide encoding human inhibitor of apoptosis gene i - useful for treating degenerative diseases, as antiviral defence mechanism and preventing cell death during trauma and strokes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Inhibitor of apoptosis 1; hIAP-1; degenerative disease; rheumatoid arthritis; septic shock; antiviral; trauma; stroke; cell death; oncogenesis; cancer; diagnosis; therapy.
                                                                                                                                                                                   Claim
                                                                                                                                                                                                                                                                                                                                       N-PSDB;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11-MAY-1995;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               inflammatory disease states, myocardial infarction, glomerular nephritis, transplant rejection and infectious diseases, e.g. HIV They can also be used in conditions requiring a reduction in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ( HUMA - )
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Match
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                                                                                                                                                                                                                                                                                                                                    1996-518608/51
DB; AAT43709.
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                                                                inhibitor of apoptosis 1 (hIAP-1) (AAW04583) is 1 for treating degenerative diseases, rheumatoid c shock, as an antiviral defence mechanism and c
                                                                                                                                                                              1; Page 40-41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               inhibitor
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HUMAN GENOME
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
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  cell
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SCI INC
  lines
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or human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 295; DB 18;
Pred. No. 6.9e-29;
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osteoclastoma stromal
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                                                                                s a process, d arthritis,
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13551 or AAW13552)
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cell
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                        obtd
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RESULT 3
AAW19746
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                  Mammalian IAP homologue B (MIHB) (AAW19746) is a human homologue of baculovirus inhibitor of apoptosis protein (IAP). Its amino acid sequence was deduced from a character (see also AAT72711) isolated from a human foetal liver cDNA library using primers based on human EST sequences that resembled the BIR repeats of Orygia pseudotsuguta polyhedrosis virus IAP. IAP homologues (see also AAW19745 and AAW19747-52) and their derivatives and chemical analogues can be used in methods for modulating apoptosis in animal cells, specifically for treatment, by inhibition, of degenerative and
                                                                                                                                                                                                                                                                                 (22-DEC-1995;
                                                                                                                                                                     ៩
                                                                                                                                                                                                                                                                                                                             03-JUL-1997.
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Inhibitor of apoptosis protein; 1 degenerative disease; infectious
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           eukaryotic
to screen i
                                                                                                                                  Claim
                                                                                                                                                         autoimmune diseases
                                                                                                                                                                  Isolated protein homologues of viral inhibitors of apoptosis - used to modulate apoptosis for treatment of degenerative, infectious or
                                                                                                                                                                                                    N-PSDB;
                                                                                                                                                                                                               WPI; 1997-350966/32
                                                                                                                                                                                                                                     Vaux DL
                                                                                                                                                                                                                                                                                                       20-DEC-1996;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAW19746
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          infectious
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PEQLASAGFYYVGRNDDVKCFCCDGGLRCWESGDDPWVEHAKWFPRCE 154
                                                                                                                                  8; Page 51-54; 136pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      inhibitor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Recombinant hIAP-1 can be produced in tic host cells, or expressed in vivo. en for modulators of hIAP-1 activity.
                                                                                                                                                                                                    AAT72711
                                                                                                                                                                                                                                                           AMRAD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         therapy;
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          disease or, by promotion, of cancer and autoimmune
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      438 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
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                                                                                                                                                                                                                                                           OPERATIONS PTY
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269..337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          diagnosis.
                                                                                                                                                                                                                                                                                                                                                                         /label=
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                                                                                                                                                         and cancer
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Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IAP; mammalian IAP ho
s disease; autoimmune
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No. 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      homologue
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5.8e-28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      prokaryotic
It can also
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IAP homologue;
immune disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MIHB
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disease

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Sequence

618 AA;

Query Match

Length 618;

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RESULT 4
AAW13545
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Best Local S
Matches 48
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                                                                                                                                                                     AAT61590/T61591) comprise a series of defined structural domain repeats and/or a RING finger domain; in particular, at least two of a first domain repeat (AAW13548), a second domain repeat (AAW13549) and a third domain repeat (AAW13551) or AAW13551 or AAW13552) and/or a RING finger domain (AAW1353 or AAW13554), or a consensus sequences derived from these human genes.

The nucleic acid is used for recombinant prodn. of human cellular inhibitor of apoptosis protein which modulates apoptosis regulation. The nucleic acids are useful in therapies where increased cell-specific apoptosis is desired, e.g. in restinosis, and refirementary discase estates murchardial infarction.
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08-AUG-1995; 950S-0512946
                                                                                                                                                                                                                                                                                                                                               Disclosure; Page 18-20; 35pp; English.
                                                                                                                                                                                                                                                                                                                                                                       Nucleic acids encoding cellular inhibitor of apoptosis proteins useful for apoptosis regulation in cells to reduce or increase apoptosis and for pharmacological screening
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Goeddel DV, Rothe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     06-AUG-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               myocardial infarction;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human c-IAP1
                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                   The human cellular inhibitor of apoptosis proteins (c-IAP1/2 -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (TULA-) TULARIK INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20-FEB-1997
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IAP; inhibitor; apoptosis; RING finger domain restinosis; myocardial infarction; nephritis; HIV.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     22-JUL-1997
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAW13545 standard;
                                                                                                                                                    nephritis,
                                                                                                                                                               inflammatory disease states, myocardial infarction, glomerular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               287
                                                                                                                                                                                                                                                                                                                                                                                                                                  -PSDB; AAT61590
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               ب
            PEQLASAGFYYVGRNDDVKCFCCDGGLRCWESGDDPWVEHAKWFPRCE 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PEQLASAGEYYVGRNDDVKCFCCDGGLRCWESGDDPWVEHAKWFPRCE 334
                                                                                                                                                                                                                                                                                                                                                                                                                                              1997-154209/14.
48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                     Similarity
                                                                                                                                       also be used
                                                                                              618
                                                                                                                                                    transplant
                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    96WO-US12860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%;
                                                     100.0%;
                                                                                                                                    in conditions requiring a reduction
                                                                                                                                                    rejection and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          618
                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                        Score 295; DB 18;
Pred. No. 9.8e-28;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 295; DB 18;
Pred. No. 9.8e-28;
; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A
                                                                                                                                                  infectious diseases, e.g. HIV
                                        Indels
                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      48
                                                                   618;
                                                                                                                                     'n
                                        <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
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Human apoptosis inhibitor HIAP-2

02-SEP-1997 AAW19583;

(first

entry)

Apoptosis inhibitor; HIAP-2; HIV; AIDS; neurodegeneration; myelodysplastic syndrome; ischaemia; myocardial infarction reperfusion injury; toxin-induced liver disease; gene ther

infarction; stroke;

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1 PEQLASAGEYYYGRNDDVKCFCCDGGLRCWESGDDPWVEHAKWFPRCE 48 PEQLASAGFYYVGRNDDVKCFCCDGGLRCWESGDDPWVEHAKWFPRCE

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287

RESULT 6

AAW19583 standard;

Protein;

819

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92
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AAY33998
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                                                                                                                                                                                                                                                                                                                                                                                                                                     YN XXX XXX DE XXX AXX ID
Best Loc
Matches
                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Cellular Inhibitor of c-IAP-1; prophylaxis;
                                                     Sequence
                                                                                       The invention provides antisense compounds of 8-30 nucleotides that inhibit the expression of human Cellular Inhibitor of Apoptosis-1 (c-IAP-1). The antisense compounds may be used for diagnostics, therapeutics (for modulating the expression of c-IAP-1), prophylaxis (e.g. to prevent or delay infection, inflammation, or tumor formation), as research reagents (e.g. to distinguish between members of a biological pathway) and in kits. The present sequence represents the human cellular inhibitor.
                                                                                                                                                                                                                                                                      WPI; 1999-561047/47.
N-PSDB; AAZ22143.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  US5958772-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human cellular inhibitor of apoptosis-1 sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAY33998;
                                                                                                                                                                                                                              Antisense compounds complementary to Cellular Inhibitor of Apoptosis-1 useful for e.g. diagnostics, therapeutics, and as research reagents
                                                                                                                                                                                                                                                                                                              Bennett CF,
                                                                                                                                                                                                                                                                                                                                                                  03-DEC-1998;
                                                                                                                                                                                                                                                                                                                                                                                             03-DEC-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          26-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAY33998 standard;
                                                                                                                                                                                                     Example 13; Columns 41-46; 32pp;
                                                                                                                                                                                                                                                                                                                                                                                                                        28-SEP-1999
                                                                                  inhibitor
                                                                                                                                                                                                                                                                                                                                       (ISIS-) ISIS PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  287 PEQLASAGFYYVGRNDDVKCFCCDGGLRCWESGDDPWVEHAKWFPRCE
Match 100.0%;
Local Similarity 100.0%;
les 48; Conservative (
                                                                            of apoptosis-1.
                                                    618 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                         Cowsert LM,
                                                                                                                                                                                                                                                                                                                                                                  9805-0205204
                                                                                                                                                                                                                                                                                                                                                                                               98US-0205204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        infection; inflammation; tumor formation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Apoptosis-1; antisense; diagnostic; therapeutic;
                                                                                                                                                                                                                                                                                                              Ackermann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               618
0
Score 295; I
Pred. No. 9.8
); Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A
                                                                                                                                                                                                     English
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.8e-28;
s 0;
                          DB
                          20;
                         Length 618;
 Indels
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 Gaps
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AAW69296
ID AAW6
XX
AC AAW6
XX 13-1
XX Huma
XX Inh
KW Inh
KW pro:
XX Home
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                                                                                                                                                    RESULT
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                                                                                                                                                                                                                                   Query Match
Best Local S
Matches 47
                                                                                                                                                                                                                                                                                                    Human XIAP, HIAP-1 and HIAP-2 and murine M-XIAP, M-HIAP-1 and M-HIAP-2 (AAW19581-86) are a new class of mammalian proteins that are inhibitors of apoptosis (IAP) and which alse characterised by the presence of a ring zinc finger domain (see also AAW19587) and at least one BIR (baculovirus IAP repeat) domain (see also AAW19588). The HIAP amino acid sequences were deduced from cDNA clones (AAT70837) and AAT70838) from a human liver library. IAP polypeptides can be expressed in host cells (in vitro or in vivo) and used in methods for treating diseases and disorders involving apoptosis, esp. in a neurodegenerative disease, a myelodysplastic syndrome or an ischaemic injury, seleted from myocardial infarction, stroke, reperfusion injury, or a toxin-induced liver disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Nucleic acid encoding an inhibitor of apoptosis polypeptide - used to inhibit apoptosis in e.g. HIV or AIDS patients, and for detection of susceptibility to apoptotic disease
                   Inhibitor of apoptosis protein; apoptosis enhancer;
proliferative disease; IAP; therapy; cancer; human;
                                                          Human HIAP-2
                                                                                                        AAW69296;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           22-DEC-1995;
04-AUG-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              05-AUG-1996;
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                                                                                 13-NOV-1998
                                                                                                                             AAW69296 standard; Protein;
                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Baird S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO9706255-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Domain
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                       287
                                                                                                                                                                                   27;
                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Korneluk RG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Page 75-77; 219pp; English.
                                                                                                                                                                                                                                                                                618 AA;
                                                                                                                                                                                                                                     Conservative
                                                         protein
                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           95US-0576956
95US-0511485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             96WO-IB01022
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /label= Ring_zinc_finger
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /label= BIR-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              'label= BIR-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    'label=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    . . 336
                                                                                                                                                                                                                                              95.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              605
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Liston
                                                                                                                             618
                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                              Score 283;
Pred. No. 2.
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                                                                                                                             Å
                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mackenzie
                                                                                                                                                                                                                                              DB 18;
2.9e-26;
                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                  Indels
                      NAIP polypeptide;
HIAP-2 protein.
                                                                                                                                                                                                                                                          618;
                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                  Gaps
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RESULT 8
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Best Local :
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                apoptosis protein (IAP), and can be used in the method of the invention. The method is for enhancing apoptosis in cells from a manmal with proliferative disease by treatment with a compound that inhibits biological activity of an IAP or NAIP polypeptide. The inhibitory compounds are used to treat proliferative diseases, specially cancers of ovary, breast, pancreas, lymph nodes, skin, blood, lung, brain, kidney, liver nasopharnyx, thyroid,central nervous system, prostate, colon, rectum, cervix or endometrium, particularly to increase their sensitivity to chemotherapeutic agents. High levels of the IAP or NAIP proteins are detected in many cancers and are associated with poor prognosis, suggested that wild-type p53 and are used for testing the effects of antisense oligonucleotides and for screening for the inhibitors.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Baird S,
Tsang B;
                                                                                                   cytostatic; cancer; ovarian cancer; adenocarcinoma; lymphoma; IAP; pancreatic cancer; embryonic development; viral pathogenesis; autoimmune disorder; neurodegenerative disease; multiple sclerosis; lupus erythematosus; herpes virus infection; pox virus infection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Inducing apoptosis in proliferative mammalian cells with inhibitor of IAP or NAIP polypeptide - also methods for prognosis based on presence of IAP and NAIP, specifically applied to cancers involving
                                                                                       adenovirus infection;
                                                                                                                                                               Human; antisense; inhibitor of apoptosis; HIAP1; HIAP2; XIAP;
                                                                                                                                                                                              Human inhibitor of apoptosis, HIAP2.
                                                                                                                                                                                                                                                          ABG65665;
                                                                                                                                                                                                                                                                                       ABG65665 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This sequence is the human HIAP-2 protein, which is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 1998-467164/40
N-PSDB; AAV55040.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                13-FEB-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             13-FEB-1998;
                                                                                                                                                                                                                            26-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Disclosure; Fig 3; 147pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (UYOT-) UNIV OTTAWA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20-AUG-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO9835693-A2
                                                                                                                                                                                                                                                                                                                                                                  287 PEQLASAGEYYYGRNDDVKCFGCDGGLRCWESGDDPWVEHAKWFPRCE 334
                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                                                                                                                                                                                                                                                                                                               1 PEQLASAGFYYVGRNDDVKCFCCDGGLRCWESGDDPWVEHAKWFPRCE
                                                                                                                                                                                                                                                                                                                                                                                                                          l Similarity
47; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Korneluk R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       618 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             98WO-IB00781
                                                                                                                                                                                                                                                                                         Protein; 618
                                                                                                                                                                                                                                                                                                                                                                                                                                            95.9%;
97.9%;
                                                                                      proliferative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Liston P,
                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 283;
Pred. No. 2
                                                                                                                                                                                                                                                                                         ₽
                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mackenzie
                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 19;
2.9e-26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             prognosis based on
d to cancers involving
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 618;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pratt C;
                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a inhibitor of
                                                                                                                                                                                                                                                                                                                                                                                               48
                                                                                                                                                                                                                                                                                                                                                                                                                            0,
                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
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04-APR-2002 WO200226968-A2

Homo sapiens

reduce or increase

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RESULT 9
AAW13552
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Best Local S
Matches 47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   composition comprising a mammalian IAP antisense molecule and a method of enhancing apoptosis in a cell, comprising administering a negative regulator of the IAP anti-apoptotic pathway to the cell. The IAP antisense inhibitor is useful for enhancing apoptosis in a cell in a mammal diagnosed with a proliferative disease. The method is useful for treating a patient diagnosed with a proliferative disease like cancer. The IAP antisense molecule is useful to treat, ameliorate, improve, sustain or prevent proliferative diseases (e.g. ovarian cancer, adenocarcinoma, lymphoma, pancreatic cancer,) and also in diseases or conditions where apoptosis is involved or implicated (e.g. embryonic development, viral pathogenesis, autoimmune disorders, neurodegenerative diseases, multiple sclerosis, lupus crythematosus and infection by herpes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The invention relates to an inhibitor of apoptosis (IAP) antisense nucleic acid (I) that inhibits IAP biological activity, regardless clength of the antisense nucleic acid, the IAP proteins may be mouse or human XIAP, HIAPI or HIAP2. Also included are a pharmaceutical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Novel antisense inhibitor of apoptosis nucleic acid useful for enhancing apoptosis in a cell, for treating cancer and other proliferative diseases -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2002-479562/51.
N-PSDB; ABK93871.
                  08-DEC-1995;
08-AUG-1995;
                                                                                                                                                                                                           IAP; inhibitor; apoptosis; RING finger domain;
myocardial infarction; nephritis; HIV.
                                                                                                                                                                                                                                                               Human c-IAP2 repeat
                                                                                                                                                                                                                                                                                                    22-JUL-1997
                                                                                                                                                                                                                                                                                                                                        AAW13552;
                                                                                                                                                                                                                                                                                                                                                                         AAW13552 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Disclosure; Fig 3; 135pp; English.
                                                                      06-AUG-1996;
                                                                                                       20-FEB-1997
                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    28-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     27-SEP-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  287
                                                                                                                                                                                                                                                                                                                                                                                                                                                            PEQLASAGFYYVGRNDDVKCFCCDGGLRCWESGDDPWVEHAKWFPRCE 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           pox virus and adenovirus).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       L Similarity 47; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sequence.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        618 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2000US-0672717
                                                                                                                                                                                                                                                                                                   (first entry)
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                95US-0569749.
95US-0512946.
                                                                    96WO-US12860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    95.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Baird S,
                                                                                                                                                                                                                                                                                                                                                                         48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 283;
Pred. No. 2.
                                                                                                                                                                                                                                                                                                                                                                         A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         present sequence is a human IAP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 23;
                                                                                                                                                                                                                              mestinosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Young
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 618;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             of.
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AAW19747
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The human cellular inhibitor of apoptosis proteins (c-IAP1/2 - AAT61590/T61591) comprise a series of defined structural domain repeats and/or a RING finger domain; in particular, at least two of a first domain repeat (AAW13547 or AAW13548), a second domain repeat (AAW13549 or AAW13550), and a third domain repeat (AAW13551 or AAW13552) and/or a RING finger domain (AAW13553 or AAW13554), or a consensus sequences derived from these human genes.

The nucleic acid is used for recombinant prodn. of human cellular inhibitor of apoptosis protein which modulates apoptosis regulation. The nucleic acids are useful in therapies where increased cell-specific apoptosis is desired, e.g. in restinosis, inflammatory disease states, myocardial infarction, glomerular nephritis, transplant rejection and infections diseases, e.g. HIV.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nucleic acids encoding cellular inhibitor of useful for apoptosis regulation in cells to a apoptosis and for pharmacological screening
                                                                                                                                                                                                                                                                                                   Key
                                                                                                                                                                                                                                                                                                                                                                                        Inhibitor of apoptosis protein; degenerative disease; infectiou
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAW19747 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  apoptosis
                22-DEC-1995;
                                                  20-DEC-1996;
                                                                                     03-JUL-1997.
                                                                                                                    WO9723501-A1
                                                                                                                                                                        Region
                                                                                                                                                                                                          Region
                                                                                                                                                                                                                                           Region
                                                                                                                                                                                                                                                                              Region
                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                       cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                            Human inhibitor of apoptosis protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               16-SEP-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 1997-154209/14.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Goeddel DV,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (TULA-) TULARIK INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 PEQLASAGFYYVGRNDDVKCFCCDGGLRCWESGDDPWVEHAKWFPRCE
|||||||||||||
1 PEQLASAGFYYVGNSDDVKCFCCDGGLRCWESGDDPWVQHAKWFPRCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      can also be
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45; Conserv
                                                                                                                                                                                                                                                                                                                                                                     therapy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        25;
                95AU-0007275
                                                  96WO-AU00827
                                                                                                                                                                                                                                                                                  Location/Qualifiers 29..97
                                                                                                                                                                                                                                                                                                                                                                       diagnosis
                                                                                                                                                        /label= RING_finger
                                                                                                                                                                                                           255..323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ease states, myocardial infarction, glomerular plant rejection and infectious diseases, e.g. HIV. used in conditions requiring a reduction in
                                                                                                                                                                                                                                             .69..236
                                                                                                                                                                                                                                                               label= BIR
                                                                                                                                                                                         label= BIR
                                                                                                                                                                                                                          label= BIR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      35pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Σ,
                                                                                                                                                                          . 593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            95.6%;
                                                                                                                                                                                                                                                                                                                                                                                      infectious
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 282; DB 18;
Pred. No. 2.7e-27;
2; Mismatches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A
                                                                                                                                                                                                                                                                                                                                                                                          disease;
                                                                                                                                                                                                                                                                                                                                                                                                         mammalian IAP homologue;
                                                                                                                                                                                                                                                                                                                                                                                                                                            homologue MIHC
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18;

Length 48; Indels

0

Gaps

0

49 48

밁 Š

autoimmune

disease;

MIHC;

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RESULT 11
AAW19582
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                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sequence was deduced from a CDNA clone (see also AAT72712) isolated from a human foetal liver CDNA library using primers based on human EST sequences that resembled the BIR repeats of Orygia pseudotsuguta polyhedrosis virus IAP. IAP homologues (see also AAW19745-46 and AAW19745-2) and their derivatives and chemical analogues can be used in methods for modulating apoptosis in animal cells, specifically for treatment, by inhibition, of degenerative
                   22-DEC-1995;
04-AUG-1995;
                                                                                                                                                                                                                                  myelodysplastic
reperfusion inju
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mammalian IAP homologue C (MIHC) (AAW19747) is a human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Isolated protein homologues of viral inhibitors of apoptosis - used to modulate apoptosis for treatment of degenerative, infectious or autoimmune diseases and cancer
                                                05-AUG-1996;
                                                                   20-FEB-1997.
                                                                                                                   Domain
                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                          diagnosis.
                                                                                                                                                                                                                                                                         Human apoptosis inhibitor HIAP-1.
                                                                                                                                                                                                                                                                                            02-SEP-1997
                                                                                                                                                                                                                                                                                                                                 AAW19582 standard; Protein; 604 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          baculovirus inhibitor of apoptosis protein (1AP). Its amino sequence was deduced from a cDNA clone (see also AAT72712) is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 9; Page 58-62; 136pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N-PSDB;
(UYOT-) UNIV OTTAWA
                                                                                      WO9706255-A2
                                                                                                                                      Domain
                                                                                                                                                         Domain
                                                                                                                                                                          Domain
                                                                                                                                                                                                                                                       Apoptosis inhibitor;
                                                                                                                                                                                                                                                                                                                                                                                  273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (AMRA-) AMRAD OPERATIONS
                                                                                                                                                                                                                                                                                                                                                                                                                                 Local
                                                                                                                                                                                                                                                                                                                                                                               infectious disease or, by promotion, of cancer and autoimmune
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1997-350966/32.
DB; AAT72712.
                                                                                                                                                                                                                                                                                                                                                                                                                      l Similarity
45; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                              604 AA;
                                                                                                                                                                                                                                   injury;
                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                           (first entry)
                   95US-0576956
95US-0511485
                                                96WO-IB01022
                                                                                                                                                                             Location/Qualifiers
29..96
                                                                                                                           'label- BIR-3
                                                                                                                                                                  labe
                                                                                                                                            label- BIR-2
                                                                                                                                                                                                                                   drome; ischaemia; myo
toxin-induced liver
                                                                                                                                                                                                                                                                                                                                                                                                                                95.6%;
93.8%;
                                                                                                                   . 591
                                                                                                                                                                                                                                                    HIAP-1; HIV; AIDS;
                                                                                                                                                                - BIR-1
                                                                                                        Ring_zinc_finger
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PTY
                                                                                                                                                                                                                                                                                                                                                                                                                      2.
                                                                                                                                                                                                                                                                                                                                                                                                                     Score 282; DB 18;
Pred. No. 3.7e-20;
2; Mismatches 1;
                                                                                                                                                                                                                                        myocardial infarction; stroke;
                                                                                                                                                                                                                                   disease;
                                                                                                                                                                                                                                  gene therapy;
                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 604;
                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    homologue amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          isolated
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AAW13546
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Best Local :
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           M-HIAP-2 (AAW19581-86) are a new class of mammalian proteins that are inhibitors of apoptosis (IAP) and which are characterised by the presence of a ring zinc finger domain (see also AAW19587) and at least one BIR (baculovirus IAP repeat) domain (see also AAW19588). The HIAP amino acid sequences were deduced from cDNA clones (AAT70837) and AAT70839) from a human liver library. IAP polypeptides can be expressed in host cells (in vitro or in vivo) and used in methods for treating diseases and disorders involving apoptosis, esp. in a neurodegenerative disease, a meurodegenerative disease, a my polypeptides or an ischaemic injury, seleted from myocardial infarction, stroke, reperfusion injury, or a toxin-induced liver disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Nucleic acid encoding an inhibitor of to inhibit apoptosis in e.g. HIV or AI of susceptibility to apoptotic disease
Nucleic acids encoding cellular inhibitor of apoptosis proteins useful for apoptosis regulation in cells to reduce or increase apoptosis and for pharmacological screening
                                                                                                                                                                                          08-DEC-1995;
08-AUG-1995;
                                                                                                                                                                                                                                                                                                                                                                            IAP; inhibitor; apoptosis; RING finger domain; myocardial infarction; nephritis; HIV.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAW13546 standard;
                                                                      WPI; 1997-154209/14.
N-PSDB; AAT61591.
                                                                                                                        Goeddel DV,
                                                                                                                                                        (TULA-) TULARIK INC.
                                                                                                                                                                                                                                             06-AUG-1996;
                                                                                                                                                                                                                                                                               20-FEB-1997.
                                                                                                                                                                                                                                                                                                             WO9706182-A1
                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                    Human c-IAP2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  22-JUL-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Baird S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 PEQLASAGFYYVGRNDDVKCFCCDGGLRCWESGDDPWVEHAKWFPRCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      27; Page 72-74; 219pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          l Similarity
45; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Korneluk RG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              604 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HIAP-1 and HIAP-2 and murine M-XIAP, M-HIAP-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                        Rothe M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                        95US-0569749
95US-0512946
                                                                                                                                                                                                                                             96WO-US12860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          95.6%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <u>ب</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 282; DB 18;
Pred. No. 3.7e-26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                φ,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mackenzie AE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      of apoptosis polypeptide AIDS patients, and for d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 604;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          detection
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Disclosure; Page 21-23; 35pp; English

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Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                           Baird S,
Tsang B;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The human cellular inhibitor of apoptosis proteins (c-IAPI/2 - AAT61590/T61591) comprise a series of defined structural domain repeats and/or a RING finger domain; in particular, at least two of a first domain repeat (AAW13547 or AAW13548), a second domain repeat (AAW13549 or AAW13551 or AAW13551 or AAW13551 or AAW13550 or AAW13553 or AAW13551 or AAW13552) and/or a RING finger domain (AAW13553 or AAW13554), or a consensus sequences derived from these human genes.

The nucleic acid is used for recombinant prodn. of human cellular inhibitor of apoptosis protein which modulates apoptosis regulation. The nucleic acids are useful in therapies where increased cell-specific apoptosis is desired, e.g. in restinosis, infilamentory disease states myocardial infarration clombarular
           apoptosis protein (IAP), and can be used in the method of the invention. The method is for enhancing apoptosis in cells from a mammal with proliferative disease by treatment with a compound that inhibits biological activity of an IAP or WAIP polypeptide. The inhibitory compounds are used to treat proliferative diseases, specially cancers of
                                                                                                                                                   of IAP or NAIP polyr
presence of IAP and
p53 mutations
                                                                                                                   Disclosure; Fig 2; 147pp; English
                                                                                                                                                                                                                              WPI; 1998-467164/40
N-PSDB; AAV55039.
                                                                                                                                                                                                                                                                                                                                                        13-FEB-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  W09835693-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           proliferative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human HIAP-1 protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAW69295 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          inflammatory disease states, myocardial infarction, glomerular nephritis, transplant rejection and infectious diseases, e.g. HIV. They can also be used in conditions requiring a reduction in
                                                                                         This sequence is the human
                                                                                                                                                                                                 Inducing
                                                                                                                                                                                                                                                                                                                                                                                                                   20-AUG-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       13-NOV-1998
                                                                                                                                                                                                                                                                                                                        (UYOT-) UNIV OTTAWA.
                                                                                                                                                                                                                                                                                                                                                                                     13-FEB-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Inhibitor of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       45; Conser
                                                                                                                                                                 apoptosis in proliferative mammalian cells with inhibitor r NAIP polypeptide - also methods for prognosis based on of IAP and NAIP, specifically applied to cancers involving
                                                                                                                                                                                                                                                                                           Korneluk R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           apoptosis
e disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
pancreas, lymph nodes, skin,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     95.6%;
93.8%;
                                                                                                                                                                                                                                                                                           Liston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein; apoptosis enhancer;
IAP; therapy; cancer; human;
                                                                                         HIAP-1 protein, which is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 282; DB 18;
Pred. No. 3.7e-26;
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                                                                                                                                                                                                                                                                                         ΑE,
 blood,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 604;
                                                                                                                                                                                                                                                                                           Pratt
lung, brain, kidney,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAIP polypeptide;
HIAP-1 protein.
                                                                                         inhibitor of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
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Best Loc
Matches
A method has been developed of defining a set of compounds that modulate the expression of a target nucleic acid (thm) sequence via binding of the compounds with the tNA sequence. The method comprises generating a library of virtual compounds in silico according to defined criteria, and evaluating in silico the binding of the virtual compounds with the tNA according to defined criteria. Also described are: (1) a method of a tNA sequence via binding of the ONS with the tNA sequence comprising generating a library of virtual compounds in silico according to defined criteria, and evaluating in silico the binding of the virtual ONS with the tNA according to defined criteria; and compounds that modulate the expression of a set of compounds that modulate the expression of a tNA sequence via binding of the compounds with the tNA according to defined criteria; and (2) a method of defining a set of compounds that modulate the expression of a tNA sequence via binding of the compounds with the tNA. The methods can be used for the generation and identification of synthetic compounds having defined
                                                                                                                                                                                                                                                                                                    Identifying compounds which modulate expression of nucleic to provide compounds having defined physical, chemical or properties, e.g. antisense activity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               rectum, cervix or endometrium, particularly to increase their sensitivity to chemotherapeutic agents. High levels of the IAP or NAIP proteins are detected in many cancers and are associated with poor prognosis, resistance to chemotherapeutic agents and mutations in p53 (it is suggested that wild-type p53 suppresses transcription of the IAP or NAIP genes). Transgenic animals are used for testing the effects of antisense
                                                                                                                                                                                                                                                                                                                                                                              N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                            WPI; 1999-620446/53.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      13-APR-1998;
28-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Identification; genetic target; gene modulation; human,
antisense oligonucleotide; phosphorothioate; target validation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human cellular
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                                                                                                                                                                                                                                                                    Example 20; Page 197-202; 264pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                               Ohasi C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (ISIS-) ISIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          13-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21-OCT-1999
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               nucleotide sequence-based technology; antisense
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         26-JAN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAY52703;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    273 PEQLASAGFYYVGNSDDVKCFCCDGGLRCWESGDDPWVQHAKWFPRCE 320
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45; Conser
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, Wyatt JR, B
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98US-0067638.
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rchers AH,
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Pred. No. 3.7e-26;
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Vickers TA;
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RESULT 15
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Best Local Similarity
                                                          Matches
                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    physical, chemical or bioactive properties. Information gathered from assays of such compounds is used to identify nucleic acid sequences that are tractable to a variety of nucleotide sequence-based technologies, e.g. antisense drug discovery and target validation. AAZ40852 to AAZ41220, and AAX52701 to AAX52706, represent sequences used in the
                                                                                                                                                       The invention provides antisense compounds of (1-30 nucleotides that inhibit the expression of human Cellular Inhibitor of Apoptosis-2 (c-IAP-2). The antisense compounds may be used for diagnostics, therapeutics (for modulating the expression of c-IAP-2), prophylaxis (e.g. to prevent or delay infection, inflammation, or tumor formation), as research reagents (e.g. to distinguish between members of a biological pathway) and in kits. The present sequence represents the human cellular
                                                                                                                                                                                                                                                                                                        Antisense compounds complementary to Cellular Inhibitor of Apoptosis-2 useful for e.g. diagnostics, therapeutics, and as research reagents -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     03-DEC-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Cellular Inhibitor of Apoptosis-2; antisense; diagnostic; therapeutic; c-IAP-2; prophylaxis; infection; inflammation; tumor formation.
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                                                                                                                 Sequence
                                                                                                                                                                                                                                                                            Example 13; Columns 45-50; 33pp; English.
                                                                                                                                                                                                                                                                                                                                                       N-PSDB; AAZ22096
                                                                                                                                                                                                                                                                                                                                                                     WPI;
                                                                                                                                                                                                                                                                                                                                                                                               Bennett CF,
                                                                                                                                                                                                                                                                                                                                                                                                                            (ISIS-) ISIS PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                         03-DEC-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human cellular inhibitor of apoptosis-2 sequence.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          exemplification of the present invention.
                                                                                                                                           inhibitor of apoptosis-2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         273
                                                                      Local
               1 PEQLASAGFYYVGRNDDVKCFCCDGGLRCWESGDDPWVEHAKWFPRCE 48
                                                                                                                                                                                                                                                                                                                                                                     1999-561046/47.
PEQLASAGFYYVGNSDDVKCFCCDGGLRCWESGDDPWVQHAKWFPRCE 320
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                                                        1 Similarity
45; Conserv
                                                                                                                 604 AA;
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                                                          Conservative
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93.8%;
                                                                     95.6%;
93.8%;
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                                                       Score 282; DB 20;
Pred. No. 3.7e-26;
2; Mismatches 1;
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Pred. No. 3.7e-36;
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                                                                                  Length 604;
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Search completed: May 5, 2003, 16:02:02 Job time: 10.4562 secs

GenCore version 5.1.4_p5_4578 Copyright (c) 1993 - 2003 Compugen Ltd.

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re greater than or equal to the score of the result being prin
is derived by analysis of the total score distribution.
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295
1 PEQLASAGFYYYGRNDDVKC......CWI:SGDDPWVEHAKWFPRCE 48
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ult No. Score	Query Match	Length	DB	ĬĎ	
283	95.9	618	2	S68450	apoptosis inhibito
2 282	95.6	358	N	(n	S
282	95.6	604	Ν	S68449	
198	67.1	268	N	T10304	
198	67.1	268	N	A53989	
195	66.1	298	Ŋ	JC7568	kidney inhibitor o
183	62.0	1447	2	T42628	neuronal apoptosis
	61.7	275	Ŋ	A45679	inhibitor-of-apopt
9 178	60.3	1232	ν	A55478	neuronal apoptosis
_	•	497	N	S69544	apoptosis inhibito
156	52.9	496	N	S68452	apoptosis inhibito
! 156	52.9	497	N	S69545	
119	40.3	150	N	T28409	8
118	40.0	286	N	D36828	orfl3 protein - Au
5 117.5	39.8	4845	N	T31067	BIR repeat contain
	39.0	292	N	T41772	IAP1 orf27 - Bomby
	37.6	275	N	T10310	inh
18 110	37.3	208	N	T03183	probable apoptosis
	35.3	997	N	T43523	cut17 protein - fi
L	33.9	155	N	T30489	apoptosis inhibito
	26.8	155	N	T37471	
2 77	•	308	N	T37474	
3 71	•	234	N	T30427	ÇD.
64.5	21.9	329	N	T28403	ORF MSV242 probabl
25 64.5	21.	. 772	N	D96504	protein F9C16.25 [
	21.	287	N	T05358	hypothetical prote.
58	19.	743	ນ	T02147	
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entragen arbua	A30040		U# /	10.0		Ū
non large	340354	J	7.7	D D	л Л	л
probable tyrosine	C71467	N	415	18.5	54.5	4
<pre>IAP2 orf71 - Bomby</pre>	T41814	N	249	18.5	54.5	ū
apoptosis inhibito	н72858	N	249	18.5	54.5	ັນ
probable cell-sur	S27852	ນ	3229	18.6	55	Ξ
hypothetical prot	S57108	Ņ	954	18.6	55	6
probable cellulase	T01929	N	625	18.6	55	ğ
embryonic abundan	S71372	ຎ	92	18.6	55	8
embryogenic abunda	S34802	N	92	18.6	55	7
regulatory protein	RGBYS3	_	1536	18.8	55.5	5
hypothetical prote	T04191	N	703	18.8	55.5	ű
protein K04G7.4	F88499	N	436	19.0	56	4
probable lysin	T13340	N	281	19.0	56	ũ
metallothionein	A38739	N	65	19.0	56	Ñ
D-alanine-D-alanyl	E89859	N	485	19.2	56.5	_
schC protein	B49918	N	555	19.5	57.5	ö

ALIGNMENTS

apoptosis inhibitor hiap-2 - human C;Species: Homo sapiens (man) C;Date: 17-Jul-1998 #sequence_revision 17-Jul-1998 #text_change 21-Jul-2000

N.; Tamai, K.; Lefebvre, C.; Baird, S.; Cherton-Horvat, G.; Faraha

NAIP and a related family of

S68450

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C;Accession: S68450
R;Liston, P.; Roy, N.; Tamal, K.; Lefebvre, C.; Baird, S
Nature 379, 349-353, 1996.
A;Ritle: Suppression of apoptosis in mammalian cells by
A;Reference number: A58182; MUID:96149249; PMID:8552191
A;Accession: S68450
                                                                                                                                                                                                        R;Stehlik, C.; de Martin, R.; Binder, B.R.; Lipp, J.
Biochem. BLophys. Res. Commun. 243, 827-832, 1998
A;Title: Cytokine induced expression of porcine inhibitor of apoptosis protein (iap)
A;Reference number: JC5964; MUID:98162622; PMID:9501011
A;Accession: JC5964
                                                                                                                                                                                                                                                                                                                                 apoptosis inhibitor - pig
C:Species: Sus scrofa domestica (domestic pig)
C:Date: 04-Sep-1998 #sequence_revision 04-Sep-1998 #text_change 02-Sep-2000
                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 2
JC5964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Description: apoptotic suppressor C; Superfamily: RING finger homology C; Keywords: apoptosis; zinc finger C; Keywords: apoptosis; zinc finger homology <RNG>
                                                                        A;Molecule type: DNA
A;Residues: 1-358 <STE>
A;Cross-references: GB:U79142; NID:g2957174; PIDN:AAC39171.1; PID:g2957175
C;Superfamily: RING finger homology
F;307-351/Domain: RING finger homology <RRN>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Cross-references: EMBL:U45879; NID:g1184317; PIDN:AAC50372.1; PID:g1184318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Molecule type: mRNA
A;Residues: 1-618 <LIS>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Status: nucleic acid sequence not shown
                                                                                                                                                                                               A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
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Best Local
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97.9%;
95.6%; Score 282; DB 2;
93.8%; Pred. No. 1.3e-25;
tive 2; Mismatches 1
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                                         Length 358;
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    Gaps
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J. Virol. 68, 2521-2520, 1534
A;Title: An apoptosis-inhibiting gene from
A;Title: An apoptosis-inhibiting gene from
A;Title: An apoptosis-inhibiting gene from
A;Title: An apoptosis-inhibiting gene from
A;Title: An apoptosis-inhibiting gene from
                                                                                                   apoptosis-inhibiting protein - Orgyia pseudotsugata multicapsid nuclear polyhedrosis C;Species: Orgyia pseudotsugata multicapsid nuclear polyhedrosis virus, OpMNPV C;Date: 15-Oct-1994 #sequence_revision 15-Oct-1994 #text_change 15-Sep-2000 C;Accession: A53989
                                                                                                                                                                                                RESULT 5
A53989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  inhibitor of apoptosis protein 3 - Orgyia pseudotsugata nuclear polyhedrosis C;Species: Orgyia pseudotsugata nuclear polyhedrosis virus, OpMNPV C;Date: 16-Jul-1999 #sequence_revision 16-Jul-1999 #text_change 15-Sep-2000 C;Accession: T10304 R;Ahrens, C.A.; Russell, R.R.; Funk, C.J.; Evans, J.; Harwood, S.; Rohrmann,
                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Cross-references: EMBL:U75930; NID:g2934903; PIDN:AAC59034.1; PID:g1911281
C;Superfamily: viral apoptosis inhibitor IAP; RING finger homology
F;217-261/Domain: RING finger homology <RRN>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Virology 229, 381-399, 1997

A:Title: The sequence of the Orgyla pseudotsugata multinucleocapsid A:Reference number: Z17011; MUID:97271300; PMID:9126251
A; Reference number: A; Accession: A53989
                                                            R;Birnbaum, M.J.; Clem, R.J.; Miller, J. Virol. 68, 2521-2528, 1994
                                                                                                                                                                                                                                                                                      밁
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT
S68449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      R;Liston, P.; Roy, N.; Tamai, K.; Lefebvre, C.; Baird, S.; Cherton-Horvat, G.; Farahani Nature 379, 349-353, 1996
A;Title: Suppression of apoptosis in mammalian cells by NAIP and a related family of IAA;Reference number: A58182; MUID:96149249; PMID:8552191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Residues: 1-268 < AHR>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Accession: T10304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A:Description: apoptotic suppressor C:Superfamily: RING finger homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Cross-references:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Molecule type: mRNA
A; Residues: 1-604 <LIS>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C; Accession: S68449
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Status: nucleic acid sequence not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Accession: S68449
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                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Function
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                                                                                                                                                                                                                                                                                                        1 PEQLASAGFYYVGRNDDVKCFCCDGGLRCWESGDDPWVEHAKWFPRCE 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 PEQLASAGFYYVGRNDDVKCFCCDGGLRCWESGDDPWVEHAKWFPRCE 48
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                                                                                                                                                                                                                                                                                    PEELAEAGFFYTGQGDKTRCFCCDGGLKDWEPDDAPWQQHARWYDRCE 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PEQLASAGFYYVGNSDDVKCFCCDGGLRCWESGDDPWVQHAKWFPRCE 320
                                                                                                                                                                                                                                                                                                                                                                              29;
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A53989
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93.8%;
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                                                                                                                                                                                                                                                                                                                                                                         Score 198; DB 2;
Pred. No. 7.1e-16;
8; Mismatches 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 282; DB 2;
Pred. No. 2.1e-25;
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                  a nuclear polyhedrosis virus PMID:8139034
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                                                                                                                                                                                                                                                                                                                                                                                                                 Length 268
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                  178
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C;Accession: JC7568
R;Lin, J.H.; Deng, G.; Huang, Q.; Morser, J. 2000
Blochem. Biophys. Res. Commun. 279, 820-831, 2000
A;Title: KIAP, a novel member of the inhibitor of apoptosis A;Reference number: JC7568; MUID: 21092523; PMID:11162435
A;Contents: Fetal kidney
A;Accession: JC7568
                                                                                                                                        A; Map position: 20q13.3
C; Keywords: apoptosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Cross-references: GB:L22564; NID:9456111; PIDN:AAB02610.1; PID:9456114 A;NOte: authors translated the codon TGG for residue 28 as Tyr, GAC for C;Superfamily: viral apoptosis inhibitor IAP; RING finger homology F;217-261/Domain: RING finger homology <RRN>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-268 <BIR>
                                                                                                                                                                               A;Gene: kiap
                                                                                                                                                                                                C; Genetics:
                                                                                                                                                                                                                                                  A; Molecule type: mRNA
A; Residues: 1-298 <LIN>
                                                                                                                                                                                                                                                                                                                                                                                                                                                kidney inhibitor
                                                                                                                                                                                                                                                                                                                                                                                                             ;Species: Homo sapiens (man);Date: 30-Jun-2001 #sequence_revision
                                                                      Matches
                                                                                                      Query Match
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105
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                                                                                       Local
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PELLAAAGFFHTGHQDKVRCFFCYGGLQSWKRGDDPWTEHAKWFPSCQ
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                                                                                       Similarity
                                                                                                                                                                                                                                 protein,
                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                              of apoptosis protein -
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                                                                                     66.1%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8,
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Pred. No. 7.1e-16;
8; Mismatches 11;
                                                                      Pred. No. 1.80
7; Mismatches
                                                                                     Score 195;
Pred. No. 1
                                                                                                                                                                                                                                                                                                                                                                                                             30-Jun-2001
                                                                                                                                                                                                                                 inhibitor
                                                                                   DB 2;
.8e-15;
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                                                                                                    Length 298;
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                                                                                                                                                                                                                                 apoptosis protein family,
152
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                                                                    Gaps
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A;Cross-references:
C;Genetics:
                                                                                                       A; Molecule type: mRNA
A; Residues: 1-1447 <YI
                                                                                                                                                            A; Reference number: A; Accession: T42628
                                                                                                                                                                          MR:Yaraghi, Z.; Diez, E.; Gros, P.; MacKenzie, A. Mamm. Genome 10, 761.763, 1999
A;Title: CDNA cloning and the 5'genomic organization of Naip2, A;Reference number: Z22179; MUID:99315342; PMID:10384056
                                                                                                                                                                                                                                                   C;Date: 11-Jan-2000 #sequence_revision 11-Jan-2000 C;Accession: T42628
                                                                                                                                                                                                                                                                                       C; Species:
                                                                                                                                                                                                                                                                                                      neuronal apoptosis inhibitory protein 2 -
Query Match
Best Local :
                                                                                                                                           ;Status:
                                                    Naip2
                                                                                                                                        preliminary; translated
                                                                                                                                                                                                                                                                                       Mus musculus (house mouse)
 Similarity
                                                                                                         <YAR>
                                                                                      EMBL: AF102871;
62.0%;
60.4%;
                                                                                                                                           from
 Score 183; DB 2;
Pred. No. 1.9e-13;
                                                                                     NID: g3860228; PID: g3860229;
                                                                                                                                             GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                          mouse
                  2;
                                                                                                                                                                                                                                                                      #text_change
               Length 1447;
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                                                                                          PIDN: AAC73002.1
                                                                                                                                                                                                                                                                        11-Jan-2000
                                                                                                                                                                                                  candidate
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for

PEQLASAGFYYVGRNDDVKCFCCDGGLRCWESGDDPWVEHAKWFPRCE

Conservative

6,

Mismatches

Indels

0

Gaps

0,

48

PRVLSAAGFVFTGKRDTVQCFSCGGCLGNWEEGDDPWKEHAKWFPKCE

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RESULT 10
S69544
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A; Molecule type: DNA
A; Residues: 1-275 <CRO>
A; Residues: 1-275 <CRO>
A; Cross-references: GB:L05494; NID:g289583; PIDN:A&A43835.1; PID:g289584
A; Cross-reference extracted from NCBI backbone (NCBIN:127014, NCBIP:127015)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  F;49-496/Domain: transmembrane #status predicted c;neyworus: apoptosis; ATP; glycoprotein; nucleotide binding;
F;94-110/Domain: transmembrane #status predicted cmp(1)
F;470-477/Region: nucleotide-binding motif A (P-loop)
F;479-496/Domain: transmembrane #status cmp(1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        d, T.O.; de Jong, P.J.; Surh, L.; Ikeda, J.E.; Korneluk, Ř.G.; MacKenzie, A. Cell 80, 167-178, 1995
R.Title: The gene for neuronal apoptosis inhibitory protein is partially deleted A;Reference number: A55478; MUID:95112344; PMID:7813013
                                    EMBO
                                                                                                                       apoptosis inhibitor IAP homolog - human
C;Species: Homo sapiens (man)
C;Date: 06-Dec-1996 #sequence_revision 13-Mar-1997
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                                                           C;Accession:
R;Duckett, C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Cross-references: GDB:120378; OMIM:600354; OMIM:253300
A;Map position: 5q12.2-5q13
C;Keywords: apoptosis; ATP; glycoprotein; nucleotide bin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Molecule type: mRNA
A; Residues: 1-1232 < ROY>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      R;Crook, N.E.;
   A; Title:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         R;ROy, N.; Mahadevan, M.S.; McLean,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Accession:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               inhibitor of apoptosis polypeptide (IAP) - Cydia pomonella granulosis virus CpGV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Accession: A55478
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query
Best I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; Gene :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Date: 21-Sep-1993 #sequence_revision
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          476/Binding site: ATP (Lys) #status predicted;618,632,823,923,1035/Binding site: carbohydra
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Species: Homo sapiens (man)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Accession: A45679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Date: 05-Jan-1996 #sequence_revision
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
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                             ckett, C.S.; Nava, V.E.; Gedrich, R.W.;
J. 15, 2685-2694, 1996
                                                                                                                                                                                                                                                                                                                                                        178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Match rocal Similarity
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                                                                                                                                                                                                                                                                                                                                                                                  PEQLASAGFYYVGRNDDVKCFCCDGGLRCWESGDDDWVEHAKWEPRCE 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PEOMADAGFFYTGYGDNTKCFYCDGGLKDWEPEDVPWEQHVRWFDRC 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PEQLASAGFYYVGRNDDVKCFCCDGGLTCWESGDDPWVEHAKWFPRC 47
                                                                                                                                                                                                                                                                                                                                                 PCVLSEAGFVFTGKQDTVQCFSCGGCLGNWEEGDDPWKEHAKWFPKCE
   conserved
                                                              $69544; $68451
.S.; Nava
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A45679
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   family
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60.3%;
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59.6%;
   of cellular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 178; DB Pred. No. 6.3e 5; Mismatches
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Pred. No. 5.5e-14;
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1, J.E.; Ko
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genes related
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                                                           Clem, R.J.; van Dongen, J.L.; Gilfillan,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 2;
.3e-13;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14;
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                                                                                                                       #text_change 17-Nov-2000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 1232;
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luk, R.G.; MacKenzie, A.
   6
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   the
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   baculovirus
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RESULT
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RESULT 11
S68452
                                                                                                                                               A;Description: apoptotic suppressor
C;Superfamily: apoptosis inhibitor IAP homolog;
C;Keywords: apoptosis; zinc finger
F;445-489/Domain: RING finger homology <RNG>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C;Keywords: apoptosis; zinc finger
F;446-490/Domain: RING finger homology <RRN>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Description: apoptotic suppressor
C; Superfamily: apoptosis inhibitor IAP homolog;
C; Keywords: apoptosis; zinc finger
                                                                                                                                                                                                                                                                             A;Molecule type: mRNA
A;Residues: 1-36,'AT',37,'K',39,'L',41-44,'H',46-58,'Q',60-412,'A',414-427,'A',429-49
A;Cross-references: EMBL:U45881; NID:g1184313; PIDN:AAC46988.1; PID:g1184314
                                                                                                                                                                                                                                                                                                                                            A; Reference number: A; Accession: S78528
                                                                                                                                                                                                                                                                                                                                                                                 submitted to the EMBL
                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Molecule type: mRNA
A; Residues: 1-496 <LIS>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Title: Suppression of apoptosis in mammalian cells A;Reference number: A58182; MUID:96149249; PMID:85521 A;Accession: S68452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   R; Liston, P.; Roy, N.; Tai
Nature 379, 349-353, 1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             apoptosis inhibitor diap
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Residues: 1-161, 'C', 163-422, 'Q', 424-497 <LIS>A; Cross-references: EMBL: U45880; NID: g1184319;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Title: Suppression of apoptosis in mammalian A; Reference number: A58182; MUID:96149249; PMII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Nature 379, 349-353,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Status: preliminary; nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Accession:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Reference number: S69544; MUID: 96256286;
                                                                                                                                                                                                                                                                                                                                                                                                   R;Baird,
                                                                                                                                                                                                                                                                                                                                                                                                                   A; Cross-references:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Status: nucleic acid sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Gene:
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A; Residues: 1-161, 'C'
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                                                                                                                                                                                                                              C; Function
                                                                                                                                                                                                                                              A;Cross-references: FlyBase:FBgn0015247
                                                                                                                                                                                                                                                                   C;Genetics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ;Liston, P.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Species: Drosophila melanogaster
Date: 17-Jul-1998 #sequence_revision 17-Jul-1998
Recession: 868452; 878528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Function
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                                                                                                            Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                   S.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LAQAGLYYQKIGDQVRCFHCNIGLRSWQKEDEPWFEHAKWSPKCQ
                         LASAGFYYVGRNDDVKCFCCDGGLRCWESGDDPWVEHAKWFPRCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        type: mRNA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Roy, N.; Tar
49-353, 1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                            BL Data
S78528
                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL: U45881; NID: g1184313; PIDN: AAC46988.1;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tamai, K.; Lefebvre, C.; Baird, S.; Cherton-Horvat, G.;

    fruit fly (Drosophila melanogaster)

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                                                                                        52.9%;
                                                                                                                                                                                                                                                                                                                                                                             Library, January 1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                not shown
                                                                      Score 156; DB 2
Pred. No. 1e-10;
6; Mismatches
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Pred. No. 8.1e-13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       sequence
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                                                                                                            Length 496;
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                                                                                                                                                                                                                                                                                                                                                                                                                     PID:g1184314
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orf13 protein - Autographa californica nuclear polyhedrosis virus C;Species: Autographa californica nuclear polyhedrosis virus, AcMNPV C;Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 17-No C;Accession: D35828; C72853 R;Braunagel, S.C.; Daniel, K.D.; Reilly, L.M.; Guarino, L.A.; Hong, T Virology 191, 1003-1008, 1992 A;Title: Sequence, genomic organization of the EcoRI-A fragment of Autopoly 191, 1003-1008, 1992 A;Title: Sequence, genomic organization of the EcoRI-A fragment of Autopoly 191, 1003-1008, 1992
                                                                                                                                                                                                                                                                                                                                                       RESULT 14
D36828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 13
T28409
                                    A;Reference number: A44221;
A;Accession: D36828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Reference number: Z20484; MUID:99102612; PMID:9847359 A;Accession: T28409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORF MSV248 probable inhibitor of apoptosis protein (IAP) - Melanoplus sanguinipes entomoc; Species: Melanoplus sanguinipes entomopoxvirus
C; Species: 21-Jan-2000 #sequence_revision 21-Jan-2000 #text_change 21-Jul-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 R;Duckett, C.S.; Nava, V.E.; Gedrich, R.W.; Clem, R.J.; van Dongen, J.L.; Gilfillan, M. EMBO J. 15, 2685-2694, 1996
A;Title: A conserved family of cellular genes related to the baculovirus iap gene and 6 A;Reference number: S69544; MUID:96256286; PMID:8654366
A;Accession: S69545
                                                                                                     A; Status: preliminary A; Molecule type: DNA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Molecule type: DNA
A; Residues: 1-150 <AFO>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               J. Virol. 73, 533-552, 1999
A;Title: The genome of Melanoplus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   R; Afonso, C.L.;
J. Virol. 73, 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    묽
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C; Accession:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C;Species: Drosophila melanogaster
C;Date: 06-Dec-1996 #sequence_revision 13-Mar-199" #text_change 21-Jan-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                apoptosis inhibitor IAP homolog - fruit fly (Drosophila melanogaster)
C;Species: Drosophila melanogaster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Gene: ilp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Cross-references: EMBL:U32373; NID:g1019116; PIDN:AAC47155.1; PID:g1019117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Residues:
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Best Local S
Matches 25
                                                                                                                                                                                       VP8 of rotavirus.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      19;
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  complete DNA sequence of Autographa californica
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                     ; Howard, S.C
586-605, 199
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in: RING finger homology <RRN>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                      genomic organization of the EcoRI-A fragment of Autographa californi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL: AF063866; NID: g4049647; PIDN: AAC97724.1; PID: g4049764
                         1994
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                                         Kuzio,
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Pred. No. 7
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Pred. No.
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                                    J.; Lopez-Ferber, M.; Possee,
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                                                                                                                                                                 PMID:1333,113
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.6e-07;
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nuclear polyhedrosis
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A;Status: p
A;Molecule
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C;Superfamily: viral apoptosis inhibitor IAP; RING finger homology
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A; Residues: 1-199, 'L', 201-286
A; Cross-references: GB:L22858;
                                                           В
                                                                                                                                                                                                     C; Keywords: membrane-associated protein
                                                                                                                                                                                                                    A;Cross-references: EMBL:Y17267; NID:g3319989; PIDN:CAA76720.1; PID:g3319990 A;Note: localized to the Golgi compartment and the vesicular system
                                                                                                                                                                                                                                                                                                                            A; Title: A giant ubiquitin-conjugating enzyme related to A; Reference number: Z20963; MUID:98292517; PMID:9628897
                                                                                                                                                                                                                                                                                                                                                                                                                                     BIR repeat containing ubiquitin-conjugating enzyme BRUCE - mouse C; Species: Mus musculus (house mouse)
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                                                                                                                                                                                                                                                                                                           A; Reference number: A; Accession: T31067
                                                                                                                                                                                                                                                                                                                                                                                                                    C;Date: 22-Oct-1999 #sequence_revision 22-Oct-1999 #text_change 21-Jul-2000
                                                                                                                                                                                                                                                         A; Residues: 1-4845 <HAU>
                                                                                                                                                                                                                                                                        A; Molecule type: mRNA
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Best Local Similarity
Matches 19; Conserv
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Best Local
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                                                           281 PDPMAQAGFYHQPASSGDDRAMCFTCSVCLVCWEPTDEPWSEHERHSPNC
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                                                                                                                                                 Similarity
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41, 1415–1422, 1998
                                                                                                                                Conservative
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ب
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NID:g510708; PIDN:AAA66657.1; PID:g559096
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 118; DB Pred. No. 1.8e 7; Mismatches
                                                                                                                                                 Score 117.5;
Pred. No. 2.
                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                G.; Jentsch,
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                                                                                                                                  Indels
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Listing first 45 summaries
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295
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/cgn2_6/ptodata/2/pubpaa/PCT_NIM_PUB.pep:*
/cgn2_6/ptodata/2/pubpaa/US06_IRM_PUB.pep:*
/cgn2_6/ptodata/2/pubpaa/US06_IRM_PUB.pep:*
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cgn2_6/ptodata/2/pubpaa/US09_NEW_PUB.pep:*
/cgn2_6/ptodata/2/pubpaa/US10_NEW_PUB.pep:*
/cgn2_6/ptodata/2/pubpaa/US10_NEW_PUB.pep:*
/cgn2_6/ptodata/2/pubpaa/US10_PUBCOMB.pep:*
/cgn2_6/ptodata/2/pubpaa/US10_PUBCOMB.pep:*
/cgn2_6/ptodata/2/pubpaa/US10_NEW_PUB.pep:*
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0 US-09-974-592-14
US-09-201-936-42
0 US-09-201-936-20
US-09-201-936-20
US-09-201-936-20
US-09-201-936-20
US-10-041-859-18
US-10-041-859-12
US-10-041-859-8
US-10-041-859-8
US-10-041-859-10
US-10-041-859-10
US-10-041-859-10
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US-09-201-936-27
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Sequence 2, Appli
Sequence 27, Appli
Sequence 8, Appli
Sequence 8, Appli
Sequence 6, Appli
Sequence 6, Appli
Sequence 14, Appli
Sequence 12, Appli
Sequence 28, Appli
Sequence 28, Appli
Sequence 18, Appli
Sequence 11, Appli
Sequence 11, Appli
Sequence 14, Appli
Sequence 14, Appli
Sequence 16, Appli
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142	144	156	156	156	156	159	160	160	160	160	160	160	174	174	174	174	174	178	178	182	182	182	182	188	188
48.1	48.8					53.9		54.2	54.2	54.2	54.2	54.2	59.0	59.0	59.0	59.0	59.0	60.3	60.3	61.7	61.7	61.7	61.7	63.7	63.7
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US-09-201-936-23	US-09-201-936-14		•	936-	US-09-201-936-21	US-09-201-936-20	US-09-974-592-10	US-09-201-936-10	US-10-041-859-13	US-09-965-967-30	US-10-041-859-19	US-09-201-936-24	US-09-974-592-4	US-09-201-936-4	US-09-964-899-39	US-09-965-967-20	US-09-201-936-25	US-08-913-322-24	US-08-913-322-22	US-09-201-936-12	US-10-041-859-11	US-10-041-859-17	US-09-201-936-29	US-10-041-859-9	US-10-041-859-15
Sequence 23, Appl	Sequence 14, Appl	Sequence 13, Appl	Sequence 21, Appl	w	Sequence 21, Appl	Sequence 20, Appl	e 10,	•	•	Sequence 30, Appl	Sequence 19, Appl	Sequence 24, Appl	Sequence 4, Appli	Sequence 4, Appli	Sequence 39, Appl	Sequence 20, Appl	Sequence 25, Appl	-	Sequence 22, Appl	Sequence 12, Appl	11,	17,	Sequence 29, Appl	Sequence 9, Appli	Sequence 15, Appl

ALIGNMENTS

US-08-464-588-2

Sequence 2, Application US/08464588 Publication No. US20030073159A1

GENERAL INFORMATION

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APPLICATION NUMBER: US/08/464,588
FILING DATE: June 5, 1995
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/US95/05922
APPLICATION NUMBER: PCT/US95/05922
ATTORNEY/AGENT INFORMATION:
NAME: PEPERAN CONT
                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:

MEDIUM TYPE: 3.5 INCH DISKET

COMPUTER: IBM PS/2

OPERATING SYSTEM: MS-DOS

SOFTWARE: WORD PERFECT 5.1

CURRENT APPLICATION DATA:
                                                                                            TELEPHONE: 201-994-170
TELEFAX: 201-994-1744
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                            NAME: FERRARO, GREGORY D.
REGISTRATION NUMBER: 36,134
REFERENCE/DOCKET NUMBER: 32,
TELECOMMUNICATION INFORMATION:
TELEPHONE: 201-994-1700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: HE, ET AL.
TITLE OF INVENTION: Human Inhibitor of Apoptosis Gene
NUMBER OF SEQUENCES: 8
MOLECULE TYPE:
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                                                      LENGTH: 438 AMINO ACIDS
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E: CECCHI, STEWART & OLSTEIN
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US-08-464-588-2

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TITLE OF INVENTION: MAMMALIAN IAP GENE FAMILY, PRIMERS,
TITLE OF INVENTION: PROBES, AND DETECTION METHODS:
FILE REFERENCE: 07891/003003
CURRENT APPLICATION NUMBER: US/09/201,936
CURRENT FILING DATE: 1998-12-01
EARLIER APPLICATION NUMBER: 09/011,356
EARLIER FILING DATE: 1998-02-04
EARLIER FILING DATE: 1998-02-04
EARLIER FILING DATE: 1996-08-05
EARLIER FILING DATE: 1996-08-05
EARLIER APPLICATION NUMBER: 08/576,956
EARLIER APPLICATION NUMBER: 08/516,956
EARLIER APPLICATION NUMBER: 08/516,956
EARLIER APPLICATION NUMBER: 08/516,956
EARLIER APPLICATION NUMBER: 08/511,485
EARLIER FILING DATE: 1995-08-04
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US-09-201-936-8
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US-09-201-936-27
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SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 27
LENGTH: 68
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 8, Application US/09201936 Publication No. US20020187946A1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EARLIER APPLICATION NUMBER: 09/011,356
EARLIER FILING DATE: 1998-02-04
EARLIER APPLICATION NUMBER: PCT/IB96/01022
EARLIER FILING DATE: 1996-08-05
EARLIER APPLICATION NUMBER: 08/576,956
EARLIER FILING DATE: 1995-12-22
EARLIER FILING DATE: 1995-12-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION: MAMMALIAN IAP GENE FAMILY, PRIMERS, TITLE OF INVENTION: PROBES, AND DETECTION METHODS FILE REFERENCE: 07891/003003

CURRENT APPLICATION NUMBER: US/09/201,936

CURRENT FILING DATE: 1998-12-01
NUMBER OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EARLIER FILING DATE: 1995-08-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EARLIER APPLICATION NUMBER: 08/511,485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Baird, Stephen APPLICANT: Liston, Peter
                                                                                                                                                                                                                                                                                               APPLICANT: MacKenzie, Alexander E.
APPLICANT: Baird, Stephen
APPLICANT: Liston, Peter
                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Korneluk, Robert G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: MacKenzie, Alexander E.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              48;
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Pred. No. 4.8e-26;
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                                                                                                                                                                                                   GENERAL INFORMATION:
APPLICANT: Korneluk, Robert G.
                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQ ID NO 8
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                              CURRENT APPLICATION NUMBER: US/09/201,936
CURRENT FILING DATE: 1998-12-01
EARLIER APPLICATION NUMBER: 09/011,356
EARLIER FILING DATE: 1998-02-04
                                                                                               TITLE OF INVENTION: MAMMALIAN IAP GENE FAMILY, TITLE OF INVENTION: PROBES, AND DETECTION METHRELE REFERENCE: 07891/003003
                                                                                                                                                  APPLICANT: Baird, Stephen APPLICANT: Liston, Peter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR FILING DATE:
NUMBER OF SEQ ID NO
SOFTWARE: FastSEQ 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION: DETECTION AND TITLE OF INVENTION: NAIP FOR THE TITLE OF INVENTION: DISEASE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: FastSEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LENGTH: 61
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION NUMBER: US 09/617,053 PRIOR FILING DATE: 2000-07-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION NUMBER: US/09/974,592
CURRENT FILING DATE: 2001-10-09
                                                                                                                                                                                     APPLICANT: MacKenzie, Alexander E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION NUMBER: US 08/800,929
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ORGANISM: Homo sapiens
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Korneluk, Robert G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH:
                                                                                                                                                                                                                                     lication No. US20020187946A1
                                                                                                                                                                                                                                                                                                                                             287
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11 Similarity 97.98;
47; Conservation
                                                                                                                                                                                                                                                                                                                                                                                                                47;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     618
              APPLICATION NUMBER: PCT/IB96/01022
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IS20020120121A1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MacKenzie,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Liston, Peter
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) for Windows Version 4.0
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1996-08-05
                            1998-02-04
                                                                                                                                                                                                                                                                                                                                                                                                                                95.98;
97.98;
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Pred. No. 4.1e-25;
0; Mismatches 1
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Pred. No. 4.1e-25;
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DIAGNOSIS AND
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SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 26
LENGTH: 68
TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                        Patent No. US20020120121A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE: FastSEQ for Windows Version 3.0 SEQ ID NO 6 LENGTH: 604
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Best Local S
                                                                                          APPLICANT:
APPLICANT:
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                                                                                                                                              APPLICANT: Korneluk,
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EARLIER FILING DATE: 1996-08-05
EARLIER APPLICATION NUMBER: 08/576,956
EARLIER FILING DATE: 1995-12-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION NUMBER: US/09/201,936
CURRENT FILING DATE: 1998-12-01
EARLIER APPLICATION NUMBER: 09/011,356
EARLIER FILING DATE: 1998-02-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: MAMMALIAN IAP GENE FAMILY, FRIMERS, TITLE OF INVENTION: PROBES, AND DETECTION METHODS FILE REFERENCE: 07891/003003
                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EARLIER APPLICATION NUMBER: 08/511,485 EARLIER FILING DATE: 1995-08-04
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                                      TITLE OF INVENTION:
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Local Similarity 93.8%;
Les 45; Conservative
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INVENTION:
                                                                                                                                                                                                          Application US/09974592
                                                                                                              MacKenzie, Alexander
Liston, Peter
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                                                      Christine
                                                                      Benjamin K
                DETECTION AND MODULATION OF IAPS AND NAIP FOR THE DIAGNOSIS AND TREATMENT OF PROLIFERATIVE
                                                                                                                                                    Robert G
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Pred. No. 6.3e-25;
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.2e-25;
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us-09-201-936-42

Sequence 42, Application US/09201936 Publication No. US20020187946A1 GENERAL INFORMATION:

APPLICANT: Korneluk, Robert G. APPLICANT: MacKenzie, Alexande

MacKenzie, Alexander

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Liston,

MAMMALIAN IAP GENE FAMILY, PR PROBES, AND DETECTION METHODS

PRIMERS

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                                                          Query Match
Best Local Similarity
Matches 45; Conserva
                                                                                                                                                                      SEQ ID NO 14
LENGTH: 612
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                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: DETECTION AND MODULATION OF IAPS AND TREATMENT OF PROLIFERATIVE TITLE OF INVENTION: DISEASE
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CURRENT APPLICATION NUMBER: US/09/974,592
CURRENT FILING DATE: 2001-10-09
                                                                                                                                                                                                        SOFTWARE:
                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER: US 08/800,929
PRIOR FILING DATE: 1997-02-13
                                                                                                                                                                                                                                                                 PRIOR APPLICATION NUMBER: PRIOR FILING DATE: 2000-07
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NUMBER OF SEQ ID NOS: 17
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                                                                                                                                       TYPE: PRT
ORGANISM: Mus musculus
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                 1 PEQLASAGFYYVGRNDDVKCFCCDGGLTCWESGDDPWVEHAKWFPRCE 48
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US20020120121A1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Korneluk, Robert G
                                                                                                                                                                                                                                                                                                                                                                                                                                      Liston,
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                                                              Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                            Benjamin K
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93.8%;
                                                                            95.6%;
93.8%;
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                                                                            Score 282; DB 10;
Pred. No. 5.3e-25;
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Pred. No. 5.2e-25;
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                                                              Mismatches
                                                                                         10;
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US-09-201-936-40
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; ORGANISM: Mus musculus
US-09-974-592-12
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SEQ ID NO 12
LENGTH: 600
                                                         Sequence 40, Application US/09201936 Publication No. US20020187946A1
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Best Local Similarity
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                                        GENERAL INFORMATION
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APPLICANT:
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EARLIER FILING DATE: 1998-02-04
EARLIER APPLICATION NUMBER: PCT/IB96/01
EARLIER FILING DATE: 1996-08-05
EARLIER APPLICATION NUMBER: 08/576,956
EARLIER APPLICATION NUMBER: 08/511,485
EARLIER APPLICATION NUMBER: 08/511,485
APPLICANT: Korneluk, APPLICANT: MacKenzie,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION NUMBER: US/09/974,592
CURRENT FILING DATE: 2001-10-09
PRIOR APPLICATION NUMBER: US 09/617,053
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PRIOR APPLICATION NUMBER: US 08/800,929
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etent No. US20020120121A1
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ORGANISM: Mus musculus
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JRRENT FILING DATE: 1998-12-01
                                                                                                                                                                                 272 QELASAGFYYTGHSDDVKCFCCDGGLRCWESGDDPWVEHAKWFPRCE 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            259 PEQLASAGEYYVDRNDDVKCLCCDGGLRCWEPGDDPWIEHAKWFPRCE 306
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                                                                                                                                                                                                                          2 EQLASAGFYYYGRNDDVKCFCCDGGLRCWESGDDPWVEHAKWFPRCE 48
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                                                                                                                                                                                                                                                                  42;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    FastSEQ for Windows Version 4.0
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Pratt, Christine
                     Korneluk, Robert G
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91.7%;
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                                                                                                                                                                                                                                                                Score 268; DB 10;
Pred. No. 2.2e-23;
3; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 276; DB 9; Length 591; Pred. No. 2.5e-24;
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US-09-201-936-40
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Best Local Similarity 87.2
Matches 41; Conservative
                                                                                                                                                                                                                                       NUMBER OF SEQ ID NOS:
SOFTWARE: FastSEQ for
SEQ ID NO 28
LENGTH: 68
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SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 40
LENGTH: 602
                                                                                   Matches
                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 28, Appropriate Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION
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EARLIER APPLICATION NUMBER: 09/011,356
EARLIER FILING DATE: 1998-02-04
EARLIER APPLICATION NUMBER: PCT/IB96/01022
EARLIER FILING DATE: 1996-08-05
EARLIER FILING DATE: 1996-08-05
EARLIER FILING DATE: 1996-08-05
                                                                                                                                                                                                                                                                                                                             EARLIER FILING DATE: 1998-02-04
EARLIER APPLICATION NUMBER: 095/01022
EARLIER FILING DATE: 1996-08-05
EARLIER APPLICATION NUMBER: 08/576,956
EARLIER APPLICATION NUMBER: 08/576,956
EARLIER FILING DATE: 1995-12-22
EARLIER APPLICATION NUMBER: 08/511,485
EARLIER FILING DATE: 1995-08-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Baird, Stepher APPLICANT: Liston, Peter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT FILING DATE: 1998-12-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION: MAMMALIAN IAP GENE FAMILY, PRIMERS. TITLE OF INVENTION: PROBES, AND DETECTION METHODS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Korneluk,
APPLICANT: MacKenzie
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EARLIER FILING DATE: 1995-12-22
EARLIER APPLICATION NUMBER: 08/511,485
EARLIER FILING DATE: 1995-08-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CURRENT APPLICATION NUMBER: US/09/201,936
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EARLIER APPLICATION NUMBER: 09/011,356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILE REFERENCE: 07891/003003
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19
                                                                                                        Local Similarity
                                       1 PEQLASAGEYYVGRNDDVKCFCCDGGLRCWESGDDPWVEHAKWFPRCE 48
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                                                                                     Conservative
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87.2%;
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Pred. No. 1.1e-22;
                                                                                                          Score 198; DB 9; Pred. No. 3:6e-16;
                                                                                   Mismatches
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RESULT 13 US-10-041-859-18

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US-10-041-859-12
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/ ORGANISM: Orgyia pseudotsugata
US-10-041-859-18
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Best Local Similarity bu...
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                                                                       Sequence 14, Application US/10041859 Publication No. US20030049796A1 GENERAL INFORMATION:
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SOFTWARE: PatentIn Ve.
SEQ ID NO 12
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LENGTH: 68
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: MAEDA, SUSUMU
TITLE OF INVENTION: INHIBITOR OF APOPTOSIS PROTEINS AND NUCLEIC ACIDS AND TITLE OF INVENTION: METHODS FOR MAKING AND USING THEM FILE REFERENCE: 087102/027 2537
CURRENT APPLICATION NUMBER: US/10/041,859
CURRENT FILING DATE: 2002-01-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 18, Application US/10041859
Publication No. US20030049796A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: HUANG,
APPLICANT: REED,
APPLICANT: DEVERA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION: INHIBITOR OF APOPTOSIS PROTEINS AND NUCLEIC ACIDS AND TITLE OF INVENTION: METHODS FOR MAKING AND USING THEM FILE REFERENCE: 087102/027 2537
CURRENT APPLICATION NUMBER: U$210/041,859
CURRENT FILING DATE: 2002-01-07
PRIOR APPLICATION NUMBER: 60/260,478
PRIOR FILING DATE: 2001-01-08
NUMBER OF SEQ ID NOS: 25
NUMBER OF SEQ ID NOS: 25
APPLICANT: HUANG, QIHONG
APPLICANT: REED, JOHN C.
APPLICANT: DEVERAOX, QUINN L.
APPLICANT: MAEDA, SUSUMU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER: 60/260,478 PRIOR FILING DATE: 2001-01-08
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APPLICANT: REED, JOHN C.
APPLICANT: DEVERAUX, QUINN L.
APPLICANT: MAEDA, SUSUMU
                                                                                                                                                                                                                                                                                                                                                                                       LENGTH: 172
TYPE: PRT
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DEVERAUX, QUINN L.
MAEDA, SUSUMU
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60.48;
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Pred. No. 8.9e-16;
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Search completed: May 5, 2003, 16:11:07 Job time: 6.91705 secs
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                                                                                                                                          Matches
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                                                                                                                                                                                                                                                                                                            FILE REFERENCE: 087102/027 2537

CURRENT APPLICATION NUMBER: US/10/041,859

CURRENT FILING DATE: 2002-01-07

PRIOR APPLICATION NUMBER: 60/260,478

PRIOR FILING DATE: 2001-01-08

NUMBER OF SED ID NOS: 25
                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: INHIBITOR OF APOPTOSIS PROTEINS AND NUCLEIC ACIDS AND TITLE OF INVENTION: METHODS FOR MAKING AND USING THEM
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                                                                      19
                                                                                                                                                         Match 65.1%;
Local Similarity 63.8%;
                                                                                      1 PEQLASAGFYYYGRNDDVKCFCCDGGLRCWESGDDPWVEHAKWFPRC 47
                                                                    30; Conservative
                                                                                                                                                       Score 192; DB 9;
Pred. No. 1.8e-15;
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Result
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Maximum DB seq length: 200000000
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Maximum Match 100%
Listing first 45 summaries
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Match
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Gapop 10.0 , Gapext 0.5
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295
1 PEQLASAGEYYVGRNDDVKC.....CW2SGDDPWVEHAKWFPRCE 48
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sp_phage:*
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Q9YNL8
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Q57319
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Q9ESE8
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Q8uwd2 brachydanio
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Q9dh2 gallus gall
Q921n0 mus musculu
Q88642 rattus norv
Q9en27 amsacta moo
Q9h28 homo sapien
Q9fca5 homo sapien
Q9gn18 choristoneu
 Q968t8
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 bombyx mori
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1160 4904 243 150	268 268 153	438 498 517	493 6	236 236 261	501 501 236	403	405 379 377 377 276 313
12 12	12 5	155	13	12 6 4	41111	5 5 12	12 5 5 13
Q8TDZ4 Q9VH01 Q91EW1 Q9YVJ4	Q91F18 Q9E232 Q9VEM2	Q9VUX5 Q960U3 Q964U8	Q95M71 Q8UVF8	Q96P09 Q95M72 Q95ES9	Q9EQ05 Q9EQ04 Q9EQ04	Q8QL95 Q8WRD9 Q8T621	Q8UWH2 Q9U492 Q9U307 Q9NJ07 O89744 Q9J827
OBtGZ4 homo sapien O9vh01 drosophila O9lew1 cydia pomon O9yvj4 melanoplus	, a N &	œ	Q95m71 gorilla gor Q8uvf8 gallus gall	096p09 homo sapien 095m72 pan troglod 09ges9 epiphyas po	Qyeq10 rattus norv Q9eq05 rattus norv Q9eq04 rattus norv Q96rw5 homo sapien	ρO	Q8uwh2 brachydanio Q9u492 trichoplusi Q9u492 trochoplusi Q9u197 spodoptera Q89744 buzura supp Q991827 spodoptera

ALIGNMENTS

RESULT 1

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Best Local S
Matches 46
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Q9IA69;
01-OCT-2000
01-OCT-2000
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O57319;
O1-JUN-1998 (TrEMBLrel. 06, Created)
O1-JUN-1998 (TrEMBLrel. 06, Last sequence update)
O1-JUN-2001 (TrEMBLrel. 17, Last annotation update)
Inhibitor of apoptosis PROTEIN 1 (IAP) (Inhibitor of T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gallus gallus (Chicken).
Gallus gallus (Chicken).
Eukaryota; Metazoa; Chordata; Craniata; Vertebhata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-OCT-2000 (TrEMBLrel. 15, Last seq. 01-DEC-2001 (TrEMBLrel. 19, Last annu Inhibitor of apoptosis 1 (Fragment). Gallus gallus (Chicken).
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                                                                                                                                                                                                                             You M., Ku P.-T., Hrdlickova R., Bose H.R. Jr., "ch-IAP1, a member of the inhibitor-of-apoptosis mediator of the antiapoptotic activity of the v-mediator of the antiapoptotic activity of the v-mol Cell Biol 17:7328-7341(1997)
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                                                                                                                                                                                                                                                                                                                                                       MEDLINE-98038801; PubMed-9372964;
                                                                                                                                                                                                                                                                                                                                                                                                STRAIN-WHITE LEGHORN; TISSUE-EMBRYONIC
                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=9031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Zhou H., Liu W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRAIN-BREED FAYOUMI; TISSUE-SPLEEN; MEDLINE-21158006; PubMed-11261557;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                135
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TISSUE SPECIFICITY: EXPRESSED AT RELATIVELY HIGH LEVELS
TISSUE SPECIFICITY: EXPRESSED AT RELATIVELY HIGH LEVELS
                                                                                                                                                                                                     FUNCTION: SUPPRESSOR
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q13490;
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   TESTIS, BRAIN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      46; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PS01282; BIR_REPEAT_1;
PS50143; BIR_REPEAT_2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         197
197
THYMUS, BURSA, INTESTINE, AND IS, BRAIN, AND SKELETAL MUSCLE
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Neognathae; Galliformes; Phasiani
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95.8%;
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Pred. No. 1e-30;
1; Mismatches
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                                                                                                                                                                                                  ONCOPROTEIN
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v-Rel oncoprotein.";
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                           H LEVELS IN THE AT VERY LOW LEVELS
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                                                                                                                                THE CYTOPLASM
                                                                                                                                                                                              V-REL-TRANSFORMED
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Best Local
                          InterPro; IPR001370; BIR.
InterPro; IPR001315; CARD:
InterPro; IPR001841; Znf_r1
Pfam; PF00653; BIR; 3.
Pfam; PF00619; CARD; 1.
Pfam; PF00097; Zf-C3HC4; 1.
SMART; SM00238; BIR; 3.
                                                                                                                                                                                                                 Brachydanio rerio (Zebrafish)
Eukaryota; Metazoa; Chordata;
Actinopterygii; Neopterygii; 7
Cyprinidae; Danio.
NCBI_TaxID-7955;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ZN_FING
SEQUENCE
                                                                                                                                                                                                                                                                                                                              Q8UWD2
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REPEAT
                                                                                              Inohara N., Nunez G.;
Submitted (NOV-2001) to the
EMBL; AF442500; AAL33679.1;
                                                                                                                                                                                                                                                                                       01-MAR-2002
01-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REPEAT
REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SMART; SM00114; CARD; SMART; SM00184; RING;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pfam;
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-!- SIMILARITY: CONTAINS A C3
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pfam:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pfam;
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                                                                                                                            SEQUENCE
                                                                                                                                                Cell Death Differ.
                                                                                                                                                            zebrafish
                                                                                                                                                                    "Genes with
                                                                                                                                                                                      SEQUENCE FROM N.A. MEDLINE-20373792;
                                                                                                                                                                                                                                                                                                            01-MAR-2002
                                                                                                                                                                                                                                                                                                                       28UWD2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    InterPro; IPR001315;
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                                                                                                                                                                             Inohara N.,
                                                                                                                                                                                                                                                                                                                                                                               280 PEQLADAGFYYVGRNDDVKCFCCDGGLRCWESGDDPWIEHAKWFPRCE
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PF00619; CARD; 1.
PF00097; zf-C3HC4; 1
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                                                                                                                                                                                                                                                                                                                                                                                                                   1 Similarity
46; Conserv
                   SM00114;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SM00238; BIR;
                                                                                                                             FROM
 PS01282;
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262
563
610 AA;
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                                                                                                                                                                   homology
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                                                                                                                           N.A.
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          CARD;
RING;
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BIR_REPEAT_1; UNKNOWN_2.
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CARD.
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                                                                  znf_ring.
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                                                                                                                                                                    mammalian apoptosis regulators identified
                                                                                                                                                                                                                                                                                       20,
21,
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Pred. No. 3.4e
1; Mismatches
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BIR REPEAT 3.
C3HC4-TYPE.
                                                                                                          EMBL/GenBank/DDBJ databases
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                                                                                                                                                                                                                                                                                                           Created)
                                                                                                                                                                                                                                      (Zebra danio).
; Craniata; Vertebrata; Euteleostomi;
Teleostei; Ostariophysi; Cypriniformes;
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                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 610;
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Best Local S
Matches 44
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Best Local
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Pfam; PF00619; CARD; 1.
Pfam; PF00097; zf-C3HC4; 1.
SMART; SM00238; BIR; 3.
SMART; SM00114; CARD; 1.
SMART; SM00184; RING; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Cloning and Characterization of the Rat Homologs of the Apoptosis Protein 1, 2, and 3 Genes.";
Submitted (SEP-1999) to the EMBL/GenBank/DDBJ databases.
-!- SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
HSBP; Q13490; 1QBH.
HSSP; Q13490; 1QBH.
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PROSITE;
PROSITE;
SEQUENCE
                                                                                              Q9QZC6;
Q1-MAY-2000 (TrEMBLrel. 13, Created)
Q1-MAY-2000 (TrEMBLrel. 13, Last sequence update)
Q1-DEC-2001 (TrEMBLrel. 19, Last annotation update)
Inhibitor of apoptosis protein 2.
Rattus norvegicus (Rat).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PROSITE;
PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q9ESE8;
01-MAR-2001 (TrEMBLrel. 16,
01-MAR-2001 (TrEMBLrel. 16,
01-JUN-2002 (TrEMBLrel. 21,
                                     Eukaryota; Metazoa;
Mammalia; Eutheria;
NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertehrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rat
NCBI_TaxID=10116;
SEQUENCE FROM N.A
                                                                                                                                                                                                                                090ZC6
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46; Conser
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PS50209;
PS50089;
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PS50143; BIR_REPEAT_2;
PS50209; CARD; 1.
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; IPR001315; CARD.
; IPR001841; Znf_ring.
00653; BIR; 3.
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                                                                                                                                                                                                                                   PRELIMINARY;
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; ZF_RING_2; 1
A; 70098 MW;
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                                                             Chordata;
Rodentia;
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91.7%;
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95.8%;
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Last annotation update)
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Pred. No. 6.5e
1; Mismatches
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                                                             Craniata; Vertebrata; Euteleostomi;
Sciurognathi; Muridae; Murinae; Rat
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.8e-28;
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Best Local S
Matches 43
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Best Local
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Pfam; PF00619; CARD; 1.
Pfam; PF00097; zf-C3HC4; 1.
SMART; SM00238; BIR; 3.
SMART; SM00114; CARD; 1.
SMART; SM001184; RING; 1.
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Q9ESE9;
01-MAR-2001
01-MAR-2001
01-JUN-2002
                                                                                                                                                                                         InterPro; IPR0013/0, ___
InterPro; IPR001315; CARD.
InterPro; IPR001841; Znf_ring.
                                                                                                                                                                                                                                           Apoptosis Protein 1, 2, and submitted (SEP-1999) to the -1- SIMILARITY: CONTAINS 1 I EMBL; AF183430; AAG22970.1; HSSP; Q13490; 1QBH.
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Pfam; PF00097; zf-C3HC4; 1
SMART; SM00238; BIR; 3.
SMART; SM00114; CARD; 1.
SMART; SM00184; RING; 1.
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                                                                                                                                                                                                                                                                "Cloning and Characterization of the Rat Homoroys or ....."
"Clossis Protein 1, 2, and 3 Genes.";
Apoptosis Protein 1, 2, and 3 Genes."

Apoptosis Protein 1, 2, and 3 Genes."

Apoptosis Protein 1, 2, and 3 Genes.";

Apoptosis Protein 1, 2, and 3 Genes.";

Apoptosis Protein 1, 2, and 3 Genes.";

Apoptosis Protein 1, 2, and 3 Genes.";

Apoptosis Protein 1, 2, and 3 Genes.";
                                                                                                                                                                                                                                                                                                                                                 Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalla; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rat
NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "Cloning of cDNA for rat inh
Submitted (SEP-1999) to the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PROSITE; PS
Zinc-finger
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InterPro; IPR001315; CARD.
InterPro; IPR001841; Znf_1
Pfam; PF00653; BIR; 3
                                                                                         Zinc-finger
                                                                                                                           PROSITE;
                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
Holcik M., Lefebvi
                                                                                                                                                                                                                                                                                                                                                                                              Inhibitor of apoptosis protein
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PEQLASAGFYYVGRNDDVKCFCCDGGLRCWESGDDPWVEHAKWFPRCE
                                  Similarity 89.6
13; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                    PS01282; BIR_REPEAT_1;
PS50143; BIR_REPEAT_2;
PS50209; CARD; 1.
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PS50143; BIR_REPEAT_2;
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                                                                                 602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         589 AA;
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                                                                                67326 MW;
                                              93.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       93.98;
91.78;
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                                                                                                                                                                                                                                                                                                                                                                                                        16, Created)16, Last sequence update)21, Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              M., Saikumar P., Venkatachalam inhibitor of apoptosis protein the EMEL/GenBank/DUBJ databases.

1 RING-TYPE ZINC FINGER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 277; DB Pred. No. 1.8e 1; Mismatches
                                   ω
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                                   Score 275; DE Pred. No. 3.3e 3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
                                                                                 CC91385EEA62DE5A CRC64;
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01-DEC-2001
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Pfam; PF00653; BIR; 3.
SMART; SM00238; BIR; 3.
PROSITE; PS01282; BIR_REPEAT_1;
PROSITE; PS0143; BIR_REPEAT_2;
NOW TEP-
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Submitted (OCT-2000) to the
EMBL; AF311289; AAG42316.1;
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                                                                                                                                Submitted (JUL-2001) to the EMBL/GenBank/DDBJ ditabases.
EMBL; BC011338; AAH11338.1; -
MGD; MGI:1197007; Birc2.
InterPro; IPR001370; BIR.
Pfam; PF00653; BIR; 3.
PROSITE; PS01282; BIR_REPEAT_1; UNKNOWN_3.
PROSITE; PS01283; BIR_REPEAT_2; 3.
SEQUENCE 374 AA; 41915 MW; 1D2B54C32D7E46F3 CRC64;
                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa;
Mammalia; Eutheria;
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                                                                                                                                                                                                                                                                                                                                                                             Mus musculus
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Pendleton C.N., Bargmann W.J., Vi
The apoptosis inhibitor ch-IAP1
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 272
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                EQLASAGFYYVGRNDDVKCFCCDGGLRCWESGDDPWVEHAKWF9RCE 48
QELASAGFYYTGHSDDVKCFCCDGGLRCWESGDDPWVEHAKWFPRCE 318
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Rodentia;
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Neognathae; Galliformes; Phasianidae; Phasianinae;
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95.6%;
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Pred. No. 1.7e
3; Mismatches
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Pl is a direct transcriptional
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01-NOV-1998 (
01-JUN-2002 (
Inhibitor of
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Bradley C.K., Lareu R.R., Dharmarajan A.M.;
"Cloning and characterisation of an inhibitor
(IAP) in the rat corpus luteum.";
Submitted (AUG-1998) to the EMBL/GenBank/DDBJ
EMBL; AF081503; AAC32497.1;
HSSP; Q13490; 10BH.
                                                                Submitted (MAR-2000)
EMBL; AF250284; AAG0
HSSP; Q13490; 1QBH.
                                                                                                                                                                                                                                                                                                                               Moyer R.W.;
                                                                                                                                SEQUENCE FROM N.A.
Bawden A.L., Glassberg
                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
MEDLINE=20396580; PubMed=10936094;
Bawden A.L., Glassberg K.J., Diggans
Moyer R.W.;
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Mammalia; Eutheria;
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                                                                                                                                                                                  "Complete Genomic Sequence of the Amsacta moorei Analysis and Comparison with Other Poxviruses."; Virology 274:120-139(2000).
                                                                                                                                                                                                                                                                                                                                                                                             AMV021.
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                                InterPro;
                                                                                                                                                                                                                                                                                                                      NCBI_TaxID=28321;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  188
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                              InterPro; IPR001370;
InterPro; IPR001841;
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PF00653; BIR; 2.
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224 AA;
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Sciurognathi; Muridae;
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EMBL; AL309298; CAC37337.1; -
EMBL; AL121877; CAC36112.1; -
HSSP; Q13490; 1QBH.
InterPro; IPRO01370; BIR.
InterPro; IPRO01370; BIR.
InterPro; IPRO01841; Znf_ring
Pfam; PF00653; BIR; 1.
Pfam; PF00653; BIR; 1.
Q9H2A8
Q9H2A8;
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01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
Livin inhibitor-of-apotosis (Inhibitor of apoptosis) (BA261N11.1.1)
Livin Tremburgal IAP repeat-containing protein 7 (Eivin), isoform 1).
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SMART; SM00184; RING; 1.
PROSITE; PS01282; BIR_REPEAT_1; 1.
PROSITE; PS50143; BIR_REPEAT_2; 1.
PROSITE; PS00518; ZF_RING_1; UNKNON Zinc-finger.
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PROSITE; PS01282; BIR_REPEAT_1; UNKNOWN_2.
PROSITE; PS50143; BIR_REPEAT_2; 2.
SEQUENCE 264 AA; 30547 MW; 2EB72DA4B59
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-!- SIMILARITY: CONT/
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Mammalia; Eutheria;
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"Livin, a novel inhibitor of apoptosis
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2nf_ring.
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new inhibitor of appptosis gene with
ties and tissue distribution pattern,";
EMBL/GenBank/DDBJ databases.
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Pred. No. 2.4e-18;
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7; Mismatches
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Pred. No. 6.
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Catarrhini;
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i; Hominidae;
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I- SIMILARITY: CONTAINS 1 RI
EMBL; BC014475; AAH14475.1; -
InterPro; IPR001370; BIR.
InterPro; IPR001841; Znf_ring
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SEQUENCE FROM N.A., Polliack A.,
Ashhab Y., Alian A., Polliack A.,
"Two splicing variants of a new in
different biological properties a
different biological properties a
Submitted (APR-2001) to the EMBL/
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01-MAR-2001 (TIEMBLrel. 16, Last sequence update)
01-JUN-2002 (TIEMBLrel. 21, Last annotation update)
Inhibitor of apoptosis protein KIAP (BA261N11.1.2)
repeat-containing protein 7 (livin), isoform 2).
BIRC7.
                                                                                                                                     Q96CA5 PRELIMINARY; PRT; 298 AA. Q96CA5; (TrEMBLrel. 19, Created) O1-DEC-2001 (TrEMBLrel. 19, Last sequence upd O1-JUN-2002 (TrEMBLrel. 21, Last annotation usinilar to baculoviral IAP repeat-containing Homo sapiens (Human).
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SMART; SM00184; RING; 1.
PROSITE; PS01282; BIR_REPEAT_1; 1.
PROSITE; PS50143; BIR_REPEAT_2; 1.
PROSITE; PS00518; ZF_RING_1; UNKNOWN_1.
Zinc-finger.
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EMBL; AF301009; AAG37878.1;
EMBL; AJ309298; CAC37338.1;
EMBL; AL121827; CAC36111.1;
HSSP; Q13490; 1QBH.
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Mammalia; Eutheria;
NCBI_TaxID=9606;
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Mammalia; Eutheria;
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TISSUE-KIDNEY;
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Pfam; PF00097; zf-C3HC4; 1.
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                                                                        TISSUE-SKIN;
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InterPro; IPR001841;
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Metazoa; Primates; (
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Znf_ring.
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RING-TYPE ZINC FINGER
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new inhibitor of apoptosis gene with
ties and tissue distribution pattern.";
EMBL/GenBank/DDBJ databases.
                                                EMBL/GenBank/DDBJ databases
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O1-MAY-1999 (TrEMBLrel. 10, C:
O1-MAY-1999 (TrEMBLrel. 10, L:
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InterPro; IPR001841; Znf_ring.
Pfam; PF00653; BIR; 2.
Pfam; PF00097; Zf-C3HC4; 1.
SMART; SM00238; BIR; 2.
SMART; SM00188; RING; 1.
                                                                                                                                                                                                                                                                                                  Lauzon H., Arif B.M., Ladd T., Palli R.;
"CfMNPV IAP gene.";
Submitted (DEC-1996) to the EMBL/GenBank/DDBJ databases.
-!- SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
EMBL; U82510; AAD00537.1;
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EMBL; U82510; AAD00537.1;
HSSP; Q13490; 10BH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pfam; PF00653; BIR; 1.
Pfam; PF00097; zf-C3HC4; 1.
PROSITE; PS01282; BIR_REPEAT_1; UNKNOWN_1.
PROSITE; PS50143; BIR_REPEAT_2; 1.
PROSITE; PS00518; ZF_RING_1; UNKNOWN_1.
Zinc-finger.
                                                                                                                                                                      SEQUENCE
                                                                                                                                                                                  PROSITE: PS01282; BIR_REPEAT_1; UNKNOWN_1.
PROSITE: PS50143; BIR_REPEAT_2; 2.
Zinc-finger.
                                                                                                                                                                                                                                                                                                                                                                                                                                         Choristoneura fumiferana nuclear polyhedrosis virus (CfMNPV). Viruses; dsDNA viruses, no RNA stage; Baculoviridae; . Nucleopolyhedrovirus. Nucleopolyhedrovirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                    STRAIN-IRELAND;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IAP protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        105 PELLAAAGFFHTGHQDKVRCFFCYGGLQSWKRGDDPWTEHAKWFPSCQ 152
                                                                                                                                                                                                                                                                                                                                                                                                               EQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 PEQLASAGFYYVGRNDDVKCFCCDGGLRCWESGDDDWVEHAKWFPRCE 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    30;
                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        298 AA; 32797 MW; D82AAEF464FAD054 CRC64;
                                                                                                                                                                     281 AA; 32090 MW; B2D9BE8A359F105E CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                 Conservative
                                                                                                              65.1%; Score 192; DB 12; Length 281; 66.0%; Pred. No. 1.6e-17; Live 5; Mismatches 1%; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 66.1%; Score 195; DB 4; Length 298; 62.5%; Pred. No. 6.7e-18; tive 7; Mismatches 11; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       281 AA.
                                                                                                              0;
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                                                                                                              Gaps
                                                                                                              0;
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GenCore version 5.1.1_p5_4578 Copyright (c) 1993 - 2003 Compugen Ltd.
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OM protein - protein search, using sw model

Run on: May 5, 2003, 15:51:32; Search time 1.99078 Seconds (without alignments) 1000.040 Million cell updates/sec

Title: Perfect score: Sequence:

US-08-569-749-9
295
1 PEQLASAGFYYVGRNDDVKC......CMESGDDPWVEHAKWFPRCE 48

Scoring table:

BLOSUM62 Gapop 10.0 , Gapext 0.5

112892 seqs, 41476328 residues

Total number of hits satisfying chosen parameters: 112892

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database : SwissProt_40:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	80	7	6	5	4	ω	2	1		NON	00001+
65.5	67.5	87.5	90.5	90.5	104	110	111	117.5	\vdash	156	160	170	171	171	174	174	174	178	182	183	186	186	186	187	195	198	268	282	282	282	290	295		Score	
22.2	22.9	•	•	•	35.3	•	•	•	٠	52.9		•	٠	•	•	•	٠		•	٠	63.1	•	•	•	66.1	•	•	•	95.6	•	٠			Vaery Vaery	*
224	224	142	142	140	997	239	275	4829	286	498	438	236	236	236	497	496	496	1403	275	1447	1403	1403	1402	1403	298	268	600	612	604	358	611	618		Length	
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IAPL_ASFM1	IAPL_ASFB7	BIR5_HUMAN	BIR5_RAT	BIR5_MOUSE	BIR1_SCHFO	ZFP_IRV6	IAP1_NPVOP	BIR6_HUMAN	IAP1_NPVAC	IAP2_DROME	IAP1_DROME	BIR8_GORGO	BIR8_PANTR	BIR8_HUMAN	BIR4_HUMAN	BIR4_RAT	BIR4_MOUSE	BIR1_HUMAN	IAP_GVCP	BIRB_MOUSE	BIRE_MOUSE	BIRA_MOUSE	BIRG_MOUSE	BIRF_MOUSE	BIR7 HUMAN	IAP3_NPVOP	BIR2_MOUSE	BIR3_MOUSE	BIR2_HUMAN	PIAP_PIG	BIR_CHICK	BIR3_HUMAN		#	
	afric		Q9jhy7 rattus norv	070201 mus musculu		chilo i	_				drosoph		pan t	homo			mus n	homo s	cydi	mus	mus	mus		mus n		orqy	Bum	mus n	home	_	qallu	Q13490 homo sapien	1042 A + 100 A	Description	

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45	44	43	42	41	40	39	38	37	36	35	34
55.5	55.5	56	57	57.5	57.5	58	58	58.5	61.5	61.5	61.5
18.8	18.8	19.0	19.3	19.5	19.5	19.7	19.7	19.8	20.8	20.8	20.8
1247	1202	65	1004	555	156	556	68	1173	238	224	224
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JAG2_MOUSE	JAG2_RAT	MTB_STRPU	PO11_SCICO	HYDL_STRHA	80DP_HUMAN .	NUMB_DROME	MT_LYTPI	TSP1_XENLA	IAPL_ASFM2	IAPL_ASFCH	IAPL_ASFC3
Q9qye5	P97607	Q27287	Q03277	Q05355	P36639	P16554	002033	P35448	011453	012407	011451
mus musc	rattus no	strongylo	sciara co	streptomy	homo sapi	drosophila	lytechinu	xenopus 1	african s	african s	african s

ALIGNMENTS

CCCCCTTTARRRRRRRRRRRRRRRRRRRRRRRRRRRRRR	RESULT RE
TISSUE-FECTAL liver; MEDLINE-9620983; PubMed-8643514; Uren A.G., Pakusch M., Hawkins C.J., Puls K.L., Vaux D.L.; "Cloning and expression of apoptosis inhibitory protein homologs that function to inhibit apoptosis and/or bind tumor necrosis factor receptor-associated factors."; Proc. Natl. Acad. Sci. U.S.A. 93:4974-4978(1996). [4] SEQUENCE FROM N.A. TISSUE-Therus; SITAUSDET R.; SUBMitted (OCT-2001) to the EMBL/GenBank/DDBJ databases. [5] STRUCTURE BY NUR OF 266-363. MEDLINE-99332054; PubMed-10404221; Hinds M.G., Norton R.S., Vaux D.L., Day C.L.; "SOLUtion structure of a baculoviral inhibitor of apoptosis (IAP) repeat."; Nat. Struct. Biol. 6:648-651(1999). 1- FUNCTION: APOPTOTIC SUPPRESSOR. THE BIR MOTIFS REGION INTERACTS WITH THE RECEPTOR ASSOCIATED FACTORS 1 AND 2 (TRAF1 AND TRAF2) TO FORM AN HETEROMERIC COMPLEX, WHICH IS THEN RECRUITED TO THE TUMOR NECROSIS FACTOR RECEPTOR 2 (TNFR2).	RESULT 1 BIR3_HUMAN STANDARD; PRT; 618 AA. CO 13490; Q16516; OT 01-NOV-1997 (Rel. 35, Created) OT 01-NOV-1997 (Rel. 35, Last sequence update) OT 15-JUN-2002 (Rel. 41, Last annotation update) DE Baculoviral IAP repeat-containing protein 3 (Inhibitor of apoptosis be protein 2) (IAP homolog B). BE protein 2) (IAP homolog B). BIRC3 OR APIZ OR IAP2 OR MIHB. OS HOMO sapiens (Human). OS HOMO sapiens (Human). OS HOMO sapiens (Human). OS NCBI_TaxID-9606; RN [1] CO HAMMMalla; Butheria; Primates; Catarrhini; Hominidae; Homo. OX NCBI_TaxID-9606; RN [1] CO HAMMMENDERS FROM N.A. ROTHERS 9612817; PubMed-8548810; RR ARCHINE-9612817; PubMed-8548810; RR PSEQUENCE FROM N.A. RR PSEQUENCE FROM

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RESULT 2
BIR_CHICK
ID BIR_C
AC 01-NC
DT 01-NC
DT 16-OC
DE Inhil
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                                                                                                                                                             Query Match
Best Local :
                                                                                                                             Matches
                BIR_CHICK
Q90660;
Q1-NOV-1997
Q1-NOV-1997
16-OCT-2001
                                                                                                                                                            CONFLICT
CONFLICT
CONFLICT
CONFLICT
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                           EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                        the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This
  protein).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       - -
         Inhibitor of apoptosis
                                                                                                                                                                                                                                                                                                                                                                                                  EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     between
                                                                                            287
                                                                                          BL; L49431; AAC41942.1; -.
BL; U45879; AAC50372.1; -.
BL; U37547; AAC5050B.1; -.
BL; BC016174; AAH16174.1; -.
B; 1QBH; 20-OCT-99.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SIMILARITY: BELONGS TO THE IAP FAMILY.
SIMILARITY: CONTAINS 3 BIR REPEATS.
SIMILARITY: CONTAINS 1 CARD DOMAIN.
SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
DATABASE: NAME-Atlas Genet. Cytogenet. Oncol.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          s SWISS-PROT entry is copyright. It is produced through a collaboration ween the Swiss Institute of Bioinformatics and the EMBL outstation - European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SUBUNIT: Interacts with SMAC and with PKSS25; these interactions inhibit apoptotic suppressor activity.
SUBCELLULAR LOCATION: Cytoplasmic (Potential).
TISSUE SPECIFICITY: PRESENT IN MANY FETAL AND ADULT TISSUES.
MAINLY EXPRESSED IN ADULT SKELETAL MUSCLE, THYMUS, TESTIS, OVARY, AND PANCREAS, LOW OR ABSENT IN BRAIN AND PERIPHERAL BLOOD TENCOPYTES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DATABASE: NAME-Atlas Genet. Cytogenet. Oncol. Haematol.; WWW="http://www.infobiogen.fr/services/chromcancer/Genes/BIRC3ID239.html".
                                                                                                                           18; Conservative
                                                                                                                                                             819
                 (Rel. 35, Created)
(Rel. 35, Last sequence update)
(Rel. 40, Last annotation updat
                                                                                                                                                                             184
184
269
453
571
157
157
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                                                   STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                  AAH16174.1; -.
                                                                                                                                    100.0%;
                                                                                                                                                            69899 MW;
         protein
                                                                                                                            0,
                                                                                                                          Score 295; DB 1;
Pred. No. 5.6e-29;
; Mismatches 0;
                                                                                                                                                           S -> P (IN REF. 2).

C -> G (IN REF. 2).

Q -> L (IN REF. 2).

L -> W (IN REF. 2).

C1778D328063586i) CRC64;
                                                   PRT;
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≅ Ľ
         (IAP) (Inhibitor
                                                                                                                                                                                                                                              3D-structure.
                                                  611
                 update)
                                                   B
         of T
                                                                                                                                           Length 618;
                                                                                                                            Indels
       cell apoptosis
                                                                                                                            0
                                                                                                                            Gaps
                                                                                                                            0
RESULT 3
PIAP_PIG
ID PIAP
AC 0626
DT 15-D
DT 15-D
DT 16-0
                                                                          밁
                                                                                         Q
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062640; 15-DEC-1998 15-DEC-1998 16-OCT-2001

(Rel. (Rel. (Rel.

37, Created)37, Last sequence update)40, Last annotation updat

update)

PIAP_PIG

STANDARD;

PRT;

358

å

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Matches
                                                                                                            Query Match
Best Local
                                                                                                                                                                               DOMAIN
ZN_FING
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                    SMART; SM00238; BIR; 3.
SMART; SM00114; CARD; 1.
SMART; SM00114; CIRC; 1.
SMART; SM00184; RING; 1.
PROSITE; PS61282; BIR_REPEAT_1;
PROSITE; PS60143; BIR_REPEAT_2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gallus gallus (Chicken).
Gallus gallus (Chicken).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
**^h^c>nria: Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                 REPEAT
REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          use by non-profit institutions as rows ... usage by and for commercial modified and this statement is not removed. Usage by and for commercial modified and this statement is not removed. Usage by and for commercial modified and this statement is not removed. Usage by and for commercial modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=97101112; PubMed=8945639;
Digby M.R., Kimpton W.G., York J.J., Connick T.E., Lowent
"ITA, a vertebrate homologue of IAP that is expressed in
                                                                                                                                                                                                                                                                                                                                         PROSITE; PS50209; CARD; 1.

PROSITE; PS00518; ZF_RING_1; FALSE_NEG.

PROSITE; PS50089; ZF_RING_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL; U27466; AAB48118.1; -. HSSP; Q13490; 1QBH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -i- SIMILARITY: BELONGS TO THE IAP FAMILY.
-i- SIMILARITY: CONTAINS 3 BIR REPEATS.
-i- SIMILARITY: CONTAINS 1 CARD DOMAIN.
-i- SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                              APOPTOS1s;
REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Lymphocytes.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=9031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro; IPR001315;
InterPro; IPR001841;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         InterPro; IPR001370;
280
                                          1 PEQLASAGFYYVGRNDDVKCFCCDGGLRCWESGDDPWVEHAKWFPRCE 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TISSUE SPECIFICITY: CELLS OF THE T LYMPHOCYTE LINEAGE. FOUND IN BOTH CORTICAL AND MEDULLARY CELLS OF THE THYMUS.
DEVELOPMENTAL STAGE: HIGH LEVELS ARE INDUCED WITHIN 4-8 HOURS OF T-CELL ACTIVATION IN SPLEEN AND THYMUS.
PEQLADAGFYYVGRNDDVKCFCCDGGLRCWESGDDPWIEHAKWFPRCE 327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PF00097; zf-C3HC4;
PF00619; CARD; 1.
PF00653; BIR; 3.
                                                                                       1 Similarity
46; Conserv
                                                                                                                                                                                                                                                                                       Zinc-finger; Repeat; Nuclear protein.
                                                                                                                                                                               611 AA;
                                                                                         Conservative
                                                                                                          98.3%;
95.8%;
                                                                                                                                                                                 69009 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BIR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CARD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SUPPRESSOR (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ring
                                                                                                                                                                               BIR 1.
BIR 2.
BIR 3.
CARD.
CARD.
RING-TYPE.
RING-TYPE.
                                                                                     Score 290; DB Pred. No. 2.3e 1; Mismatches
                                                                                         1;
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                                                                                                          290;
No. 2.
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                                                                                                               DB 1;
.3e-28;
                                                                                                                               Length 611;
                                                                                         Indels
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                                                                                                                                                                                                                                                                                                  RESULT 4
BIR2_HUMAN
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Best Local S
Matches 45
                                                                                                                                                                                                                                                                                                                                                                     Pfam; PF00097; zf-C3HC4; 1.

Pfam; PF00639; CARD; 1.

Pfam; PF00639; BIR; 2.

SMART; SM00134; CARD; 1.

SMART; SM00114; CARD; 1.

SMART; SM00184; RING; 1.

SMART; PS01282; BIR_REPEAT_1; 2.

PROSITE; PS01283; BIR_REPEAT_2; 2.

PROSITE; PS500143; BIR_REPEAT_2; 2.
                     BIR2_HUMAN STANDARD; PRT; 604 AA.
Q13489; Q16628; Q9UP46; Q9HC27;
Q1-NOV-1997 (Rel. 35, Created)
Q1-NOV-1997 (Rel. 35, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Baculoviral IAP repeat-containing protein 1 (Inhibitor of apoptosis protein 1) (HIAP-1) (C-IAP2) (TNFR2-TRAF signaling complex protein 1) (IAP homolog C).
BIRC2 OR APII OR IAPI OR MIHC.
Homo sapiens (Human).
                                                                                                                                                                                                                                                                                                DOMAIN
ZN_FING
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             InterPro; IPR001370; BIR.
InterPro; IPR001315; CARD.
InterPro; IPR001841; Znf_ring.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; U79142; AAC39171.1;
HSSP; Q13490; 1QBH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Stehlik C., de Martin R., Binder B.R., I "Cytokine induced expression of porcine
  Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               entities requires a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        modified and this statement
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       use
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=98162622;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sus scrofa (Pig)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Putative inhibitor PIAP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=9823;
                                                                                                                                                                                                    108
                                                                                                                                                                                                                           μ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  European
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SWISS-PROT entry is copyright. It is produced through een the Swiss Institute of Bioinformatics and the Eleuropean Bioinformatics Institute. There are no rest
                                                                                                                                                                                                                        PEQLASAGFYYVGRNDDVKCFCCDGGLRCWESGDDPWVEHAKWFPRCE 48
                                                                                                                                                                                                 PEQLASAGFYYMGHSDDVKCFCCDGGLRCWESGDDPWVEHAKVFPRCE 155
                                                                                                                                                                                                                                                  l Similarity
45; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       non-profit
                                                                                                                                                                                                                                                                                                                                                           Zinc-finger; Repeat
                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                  AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PubMed=9501011;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             of.
Chordata; Craniata; Vertebrata; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Chordata; Craniata; Vertebrata; Cetartiodactyla; Suina; Suidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              license agreement (See
                                                                                                                                                                                                                                                                                                 40977 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   institutions as long as its content
                                                                                                                                                                                                                                                            95.6%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           is not removed.
                                                                                                                                                                                                                                                Score 282; DI
Pred. No. 1.36
2; Mismatches
                                                                                                                                                                                                                                                                                                          BIR 1.
BIR 2.
CARD
RING-TYPE.
                                                                                                                                                                                                                                                                                                 EB2268FA9A6190A4 CRC64;
                                                                                                                                                                                                                                               DB 1; 1
..3e-27;
les 1:
  Hominidae;
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            Euteleostomi;
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Sus.
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ent is in
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MBL outstation -
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RA Baens M., Steyls A., Dierland J., De Wolf-Peeters C., Marynen P.;
RA Baens M., Steyls A., Dierland J., De Wolf-Peeters C., Marynen P.;
RY "Structure of the MIT gene and molecular characterization of the
RT genomic breakpoint junctions in the t(11;18)(q21;q21) of marginal zone
RT genomic breakpoint junctions in the t(11;18)(q21;q21) of marginal zone
RT genomic breakpoint junctions in the t(11;18)(q21;q21) of marginal zone
RT genomic breakpoint junctions in the t(11;18)(q21;q21) of marginal zone
RT genomic breakpoint type.";

RT Genes Chromosomes Cancer 29:281-221(2000).

C i- FUNCTION: ANOPTOTIC SUPPRESSOR. THE BIR MOTIFS REGION INTERACTS
C MITH THE RECEPTOR ASSOCIATED FACTORS 1 AND 2 (TRAF1 AND TRAF2) TO
FORM AN HETEROMERIC COMPLEX, WHICH IS THEN RECRUITED TO THE TUMOR
C NECROSIS FACTOR RECEPTOR 2 (TNFR2).

C INCLUDING FACTOR RECEPTOR 2 (TNFR2).

C INCLUDING SPLEEN, THYMUS AND PERIPHERAL LUNG, AND KIDNEY. IN
THE ADULT, EXPRESSION IS MAINLY SEEN IN LYMPHOID TISSUES,
INCLUDING SPLEEN, THYMUS AND PERIPHERAL LUNGD LYMPHOCYTES.

C INCLUDING SPLEEN, THYMUS AND PERIPHERAL LUNGD LYMPHOCYTES.

C INCLUDING SPLEEN, THYMUS AND PERIPHERAL LUNGD LYMPHOCYTES.

C INCLUDING SPLEEN, THYMUS AND PERIPHERAL LUNGD LYMPHOCYTES.

C INCLUDING SPLEEN, THYMUS AND PERIPHERAL LUNGD LYMPHOCYTES.

C INCLUDING SPLEEN, THYMUS AND PERIPHERAL LUNGD LYMPHOCYTES.

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C INCLUDING SPLEEN, THYMUS AND PERIPHERAL LUNGD LYMPHOCYTES.

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C INCLUDING SPLEEN, THYMUS AND PERIPHERAL LUNGD LYMPHOCYTES.

C INCLUDING SPLEEN, THYMUS AND PERIPHERAL LUNGD LYMPHOCYTES.

C INCLUDING SPLEEN, THYMUS AND PERIPHERAL LUNGD LYMPHOCYTES.

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MEDLINE-96128127; PubMed-8548810;

Rothe M., Pan M. Go., Henzel W.J., Ayres T.M., Goedde:

"The TNFR2-TRAF signaling complex contains two novel
to baculoviral inhibitor of apoptosis proteins.";
                                                                                                                                                                                                                              This
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Uren A.G., Pakusch M., Hawkins C.J., Puls K.L.,
"Cloning and expression of apoptosis inhibitory
function to inhibit apoptosis and/or bind tumor
receptor-associated factors.";
Proc. Natl. Acad. Sci. U.S.A. 93:4974-4978(1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Liston P., Roy N., Tamai K., Lefebvre C., Baird Farahani R., McLean M., Ikeda J., Mackenzle A., "Suppression of apoptosis in mammalian cells by family of IAP genes.", Nature 379:349-353(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE OF 362-441 FROM N.A. MEDLINE=20519161; Pubmed=1106
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Horrevoets A.J., Fontijn R.D.,
ten Cate J.W., Pannekoek H.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cell 83:1243-1252(1995).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=99252096;
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                                                                                                                                                  s SWISS-PROT entry is copyright. It is produced through ween the Swiss Institute of Bioinformatics and the Elemopean Bioinformatics Institute. There are no resti
                                                                                                                                                                                                                                                                                   SIMILARITY: BELONGS TO THE IAP FAMILY. SIMILARITY: CONTAINS 3 BIR REPEATS. SIMILARITY: CONTAINS 1 CARD DOMAIN. SIMILARITY: CONTAINS 1 RING-TYPE ZINC
                                                                                                                                                                                                                                                                                                                                                                                                                                                          cytogenetically abnormal low-grade MALT
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             s requires a license agreement (See an email to license@isb-sib.ch).
                                                                                   non-profit institutions as long and this statement is not removed.
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Fontijn R.D., van
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                                                    http://www.isb-sib
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                                                                                          Usage
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protein homologs that
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Korneluk R.G.;
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Best Local :
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SMART; SM00114; CARD; 1.

SMART; SM00114; RING; 1.

SMART; SM00184; RING; 1.

SMART; SM00184; RING; 1.

PROSITE; PS01282; BIR_REPEAT_1; 3.

PROSITE; PS50143; BIR_REPEAT_2; 3.

PROSITE; PS500209; CARD; 1.

PROSITE; PS500518; ZF_RING_1; FALSE_NEG.

PROSITE; PS50089; ZF_RING_2; 1.
                                                                                                           Mus musculus (Mouse).
Eukaryota; Metazoa; Ch
Mammalia; Eutheria; Ro
NCBI_TaxID=10090;
                                                                                                                                               BIR3_MOUSE STANDARD; PRT; 612 AA. Q62210; 008864; Q62210; 008864; 01-NOV-1997 (Rel. 35, Created) 01-NOV-1997 (Rel. 35, Last sequence update) 15-UUN-2002 (Rel. 41, Last annotation update) Baculoviral IAP repeat-containing protein 3 (Inhibitor of apoptosis protein 2) (MIAP2) (MIAP-2). BIRG3 OR API2 OR IAP2.
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ZN_FING
                                                                     SEQUENCE FROM N.A., AND PARTIAL S MEDLINE-96128127; PubMed-8548810; Rothe M., Pan M.-G., Henzel W.J.,
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Pfam;
 TISSUE-Skeletal mu
MEDLINE-98110590;
                                                                                                                                                                                                                                       MOUSE
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                      SEQUENCE FROM N.A.
                                       Rothe M., Pan M.-G., Henzel W.J., Ayres T.M., Goeddel D.V.; "The THR2-TRAF signaling complex contains two novel proteins related to baculoviral inhibitor of apoptosis proteins."; cell 83:1243-1252(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Apoptosis;
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                                                                                                                                                                                                                                                                               273
                                                                                                                                                                                                                                                                                                                                Local
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AF178945;
Q13490; 1Q
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PF00619; CARD; 1.
PF00653; BIR; 3.
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45; Conserv
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           muscle;
  PubMed-9441758
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Rodentia;
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93.8%;
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RING-TYPE.
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                                                                                          SEQUENCE
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.2e-27;
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musculus

(Mouse)

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BIR2_
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Best Local S
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WITH THE RECEPTOR ASSOCIATED FACTORS 1 AND 2 (TRAF1 AND TRAF2) 7

C FORM AN HETEROMERIC COMPLEX, WHICH IS THEN RECRUITED TO THE TUMO

RECROSIS FACTOR RECEPTOR 2 (TNFR2).

C -!- SUBUNIT: Interacts with SMAC and with PRSS25; these interactions

C -!- SUBUNIT: Interacts with SMAC and with PRSS25; these interactions

C -!- SUBCELLULAR LOCATION: Cytoplasmic (Potential).

C -!- SUBCELLULAR LOCATION: Cytoplasmic (Potential).

C -!- TISSUE SPECIFICITY: EXPRESSED IN HEART, BRAIN, SPLEEN, LUNG,

LIVER, SKELETAL MUSCLE, KIDNEY, AND TESTIS.

C -!- SIMILARITY: CONTAINS 3 BIR REPEAUS.

C -!- SIMILARITY: CONTAINS 1 CARD DOMAIN.

C -!- SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
                                                                                                                                                                                                                                                                                                                                   Matches
                                                  008863;
01-NOV-1997
01-NOV-1997
15-JUN-2002
Baculoviral
                                                                                                                                                                                                                                                                                                                                                                                                                 CONFLICT
SEQUENCE
                                                                                                                                                                          MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        InterPro;
InterPro;
            01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Baculoviral IAP repeat-containing protein 2 (Inhibitor of apoptosis protein 1) (MIAP1) (MIAP-1).
BIRC2 OR APII OR IAP1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SMART; SM00238; BIR; 3.
SMART; SM0014; CARD; 1.
SMART; SM00184; RING; 1.
PROSITE; PS01282; BIR_REPEAT_1;
PROSITE; PS50148; BIR_REPEAT_2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL;
EMBL;
HSSP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               use by non-profit institutions as long modified and this statement is not removed. entitles requires a license agreement (See or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the E the European Bioinformatics Institute. There are no restricted the statement of the statement of the swiss of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of the statement of th
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PROSITE; PS00518; ZF_RING_1;
PROSITE; PS50089; ZF_RING_2;
                                                                                                                                                       BIR2_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ZN_FING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Apoptosis;
REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        InterPro;
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; U88909; AAC53532.1;
; Q13490; 1QBH.
MGI:1197009; Birc3.
                                                                                                                                                                                                                                                                           PEQLASAGFYYVGRNDDVKCFCCDGGLRCWESGDDPWVEHAKWFPRCE
                                                                                                                                                                                                                                                          PEQLASAGFYYVDRNDDVKCFCCDGGLRCWEPGDDPWIEHAKWFPRCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PF00097;
PF00619;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PF00653; BIR; 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2 genes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 P., Lefebvre C., For ic characterization
                                                                                                                                                                                                                                                                                                                                   Similarity
45; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     : IPR001370;
: IPR001315;
: IPR001841;
                                                                                                                                                                                                                                                                                                                                                                                                                 46
177
262
447
565
380
612
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                                                                                                                                                                                                                                                                                                                                     Conservative
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zf-C3HC4; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                   AA;
                                                                                                                                                       STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 70; BIR.
70; BIR.
5; CARD.
2nf
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329
537
600
380
                                                                                                                                                                                                                                                                                                                                                      95.6%;
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on of
                                                                                                                                                                                                                                                                                                                                                                                                                     MW;
                                                                                                                                                                                                                                                                                                                                 Score 282; DB Pred. No. 2.2e 1; Mismatches
                                                                                                                                                                                                                                                                                                                                     <u>,,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BIR 2.
BIR 3.
CARD.
                                                                                                                                                                                                                                                                                                                                                                                                                 RING-TYPE:
E -> K (IN REF. 2).
; E08969D93C6C610D CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FALSE_NEG
                                                                                                                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            \omega \omega
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mouse inhibitor of apoptosis
                                                                                                                                                         600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (See http://www.isb-sib
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    There are no rest
                                                                                                                                                                                                                                                                                                                                 DB 1; I
2.2e-27;
les 2;
                                                                                                                                                         ₽
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                                                                                                                                                                                                                                                                                                                                                                         Length 612;
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                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                              48
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AND TRAF2) TO
TO THE TUMOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a collaboration -
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IAP3_NPVOP
ID IAP3_N
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                                                                                          RESULT
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Best Local S
Matches 42
                                                                                                                                                                                                                                                                                                                                                                                          InterPro; IPR001370; BIR.
InterPro; IPR001315; CARD:
InterPro; IPR001841; Znfring.
InterPro; IPR001841; Znfring.
InterPro; IPR001841; Znfring.
InterPro; IPR001841; Znfring.
InterPro; IPR00184; ZnRD; 1.
Pfam; PF00619; CARD; 1.
Pfam; PF00653; BIR; 3.
SWART; SW00238; BIR; 3.
SWART; SW00184; RING; 1.
SWART; SW00184; RING; 1.
             01-NOV-1995
01-NOV-1995
16-OCT-2001
                                                                                                                                                                                                                                     DOMAIN
ZN_FING
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      I and 2 genes.";
Genomics 46:495-503(1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 entities requires a license agreement (Some send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics; and the Entropean Bioinformatics Institute. There are no resti
                                                   IAP3_NPVOP
P41437;
                                                                                                                                                                                                                                                                           REPEAT
REPEAT
                                                                                                                                                                                                                                                                                                                                                        PROSITE; PS01282; BIR_REPEAT_1; PROSITE; PS50143; BIR_REPEAT_2; PROSITE; PS50209; CARD; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; U88908;
HSSP; Q13490;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          use by non-profit institutions as long modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                               PROSITE;
                                                                                                                                                                                                                                                                                                                                           PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "Genomic characterization and 2 genes.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE-98110590;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=10090;
                                                                                                                                272
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FUNCTION: APOPTOTIC SUPPRESSOR. THE BIR MOTIFS REGION INTERACTS
WITH THE RECEPTOR ASSOCIATED FACTORS 1 AND 2 (TRAF1 AND TRAF2) TO
FORM AN HETEROMERIC COMPLEX, WHICH IS THEN RECRUITED TO THE TUMO!
NECROSIS FACTOR RECEPTOR 2 (TNFR2) (BY SIMILARITY).
SUBUNIT: Interacts with SMAC and with PRSS25; these interactions
inhibit apoptotic suppressor activity (By similarity).
SUBCELLULAR LOCATION: Cytoplasmic (Potential).
SUBCELLULAR LOCATION: CYTOPLASMIC (Potential).
SIMILARITY: BELONGS TO THE IAP FAMILY.
SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
                                                                                                                                                        N
                                                                                                                               CELASAGFYYTGHSDDVKCFCCDGGLRCWESGDDPWVEHAKWPPRCE 318
                                                                                                                                                        EQLASAGFYYVGRNDDVKCFCCDGGLRCWESGDDPWVEHAKWPPRCE 48
                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                            PS50209; CARD; 1.
PS00518; ZF_RING_1;
PS50089; ZF_RING_2;
  95 (Rel. 32, 0)
95 (Rel. 32, 1)
96 (Rel. 40, 1)
96 inhibitor 3
                                                                                                                                                                                                                                                                          Zinc-finger;
27 94
167 233
253 320
                                                                                                                                                                                                                                 436
553
600
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                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1QBH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAC53531.1;
                                                                                                                                                                                                                                      Ŗ
                                                                 STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   muscle;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PubMed=9441758;
re C., Fong W.G., Xuan J.Y., Korneluk R.G.;
rization of the mouse inhibitor of apoptosis protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Birc2
                                                                                                                                                                                                                                    94 B
233 B
320 B
525 C
588 C
588 WW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Chordata; Craniata; Vertebrata; Euteleostomi; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                             90.8%;
 Created)
Last sequence update)
Last annotation updat
(IAP-3).
                                                                                                                                                                                                                                                                                                               Repeat.
                                                                                                                                                                                                                                               BIR 1.
BIR 2.
BIR 3.
CARD.
RING-TYPE.
                                                                                                                                                                                            Score 268;
Pred. No. 1
                                                                                                                                                                                                                                                                                                                                           FALSE_NEG.
                                                                PRT;
                                                                                                                                                                                                                                    AD7F73E6849317D1 CRC64;
                                                                                                                                                                                 Mismatches
                                                                268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       There are no rest
                                                                                                                                                                                             DB 1;
..2e-25;
                                                                ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (isage
                                                                                                                                                                                                           Length 600;
                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      restrictions
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gh a collaboration EMBL outstation -
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AND TRAF2) TO
TO THE TUMOR
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Matches 29
                                    (9bCA5) (yanan, 15-JUN-2002 (Rel. 41, Created)
15-JUN-2002 (Rel. 41, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
15-JUN-2002 (Rel. 41, Last annotation update)
Baculoviral TAP repeat-containing protein 7 (Kidney inhibitor of apoptosis protein)
                                                                                                                                          HUMAN
BIR7_F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         InterPro;
InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the Entropean Bioinformatics Institute. There are no restructe by non-profit institutions as long as its content modified and this statement is not removed. Usage by and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Orgyia
              apoptosis protein) (KIAP)
(ML-IAP) (Livin)
BIRC7 OR KIAP OR MLIAP OR
                                                                                                                          BIR7_HUMAN
Q96CA5; Q91
                                                                                                                                                                                                                                                                                                                                                                 REPEAT
ZN_FING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              polyhedrosis virus genome.";
Virology 229:381-399(1997).
-1- FUNCTION: ACTS BY BLOCKING CELLULAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Birnbaum M.J., Clem R.J., Miller L.K.;
"An apoptosis-inhibiting gene from a nuclear encoding a polypeptide with Cys/His sequence J. Virol. 68:2521-2528(1994).
                                                                                                                                                                                                                                                                                                                                                  SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   entities requires a license agreement (S or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Nucleopolyhedrovirus.
NCBI_TaxID=164623;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "The sequence of the Orgyia
"in-Arraia virus genome.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Rohrmann G.F.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ahrens C.H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
MEDLINE-94187094; PubMed-8139034;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Viruses; dsDNA viruses,
                                                                                                                                                                                                                                                                                                                                                                                                  REPEAT
                                                                                                                                                                                                                        129
                                                                                                                                                                                                                                         1 PEQLASAGFYYVGRNDDVKCFCCDGGLRCWESGDDDWVEHAKWFPRCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PREVENTING VIRAL STIMULATION OF APOPTOSIS SIMILARITY: CONTAINS 2 BIR REPEATS. SIMILARITY: CONTAINS 1 RING-TYPE ZINC FING
                                                                                                                                                                                                                      OR IAP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       L22564;
U75930;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pro; IPR001841; Znf_ring.
PF00097; zf-C3HC4; 1.
PF00653; BIR; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q13490;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SM00238; BIR; 2
SM00184; RING;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  pseudotsugata multicapsid polyhedrosis virus (OpMNPV).
s; dsDNA viruses, no RNA stage; Baculoviridae;
                                                                                                                          Q9H2A8; Q9HAP7;
                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                              PS01282; BIR_REPEAT_1; 2.
PS50143; BIR_REPEAT_2; 2.
PS00518; ZF_RING_1; FALSE
PS50089; ZF_RING_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                               Zinc-finger; Repeat.
                                                                                                                                                                                                                                                                                                                                                  268
                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Russell R.R.,
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300; PubMed=9126251;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAB02610.1; -.
AAC59034.1; -.
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                                                                                                                                          STANDARD;
                                                                                                                                                                                                                                                                                                                                            256 RJ
30076 MW;
                                                                                                                                                                                                                                                                                                  67.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BIR.
                                                                                                                           Q9BQV0;
                  LIVIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Funk
                                                                                                                                                                                                                                                                                     8,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              pseudotsugata
                                                                                                                                                                                                                                                                                                                                                                 BIR 1.
BIR 2.
RING-TYPE.
                                                                                                                                                                                                                                                                                                  Score 198; DB 1;
Pred. No. 2.3e-17;
                                                                                                                                                                                                                                                                                                                                                                                                                                             FALSE_NEG
                                                                                                                                            PRT;
                                                                                                                                                                                                                                                                                                                                                  DF89175FDE85A708 CRC64;
                                                                                                                                                                                                                                                                                       Mismatches
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                                                                                                                                            298
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (See http://www.isb-sib
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    PubMed=11801603;
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Primates;
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Catarrhini; Hominidae,
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"IAP suppression of apoptosis involves distinct mechanisms: the TAK1/JNK1 signaling cascade and caspase inhibition.";
Mol. Cell. Biol. 22:1754-1766(2002).
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). Biol. Chem. 277:12275-12279(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (shown here) and 3; are produced by alternative splicing. TISSUE SPECIFICITY: Very low levels or not detectable in most adult tissues. Detected in adult heart, placenta, lung, lymph node, spleen and ovary, and in several carcinoma cell lines (isoforms 1 and 2). Isoform 2 (but not isoform 1) is detected fetal kidney, heart and spleen, and at lower levels in adult brain, skeletal muscle and peripheral blood leukocytes. SIMILARITY: CONTAINS 1 BIR REPEAT.
SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
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ALTERNATIVE PRODUCTS: 3 isoforms;
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PF00097; zf-C3HC4; 1
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CAC37338.1;
AAG35622.1;
CAC36111.1;
CAC36112.1;
CAC36113.1;
CAC36113.1;
AAH14475.1;
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BIR_REPEAT_2;
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Best Local
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HSSP; 013490; 10BH.
MGD; MGI:1298222; Birclf.
InterPro; IPR001370; BIR.
Pfam; PP00653; BIR; 3
SMART; SM00238; BIR; 3
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16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Baculoviral IAP repeat-containing protein If (Neuronal apoptosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CONFLICT
SEQUENCE
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-!- FUNCTION: PREVENTS MOTOR-NEURON APOPTOSIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "The mouse region syntenic for hun within the Lgnl critical interval exon 5.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRAIN-129/SvJ;
MEDLINE-97131520;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     inhibitory protein 6).
BIRCIF OR NAIP6 OR NAIP-RS4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BIRF_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Scharf J.M., Damron D., Fri
Kunkel L.M., Dietrich W.F.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE OF 82-168 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MUTAGEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MUTAGEN
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  PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE=20414747; PubMed=10958627;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MUTAGEN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   105
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                                                                                                                                                                                                                                                                                                                                                                                    SIMILARITY: CONTAINS 3 BIR REPEATS. SIMILARITY: CONTAINS 1 NACHT DOMAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PEQLASAGEYYVGRNDDVKCFCCDGGLRCWESGDDPWVEHAKWFPRCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        l Similarity
30; Conser
PS01282; BIR_REPEAT_1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   66.1%;
milarity 62.5%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                223
298
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87
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PubMed-8975718;
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32798
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88
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Pred. No. 5.9e
7; Mismatches
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MISSING (IN ISOFORM 1).

EE->AA: NO CHANGE IN SMAC INTERACTION AND ANTI-APOPTOTIC ACTIVITY.

D->A: ABOLISHES INHIBITION OF CASPASES,

SMAC BINDING AND ANTI-APOPTOTIC ACTIVITY.

C->A: ABOLISHES INHIBITION OF CASPASES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SMAC BINDING AND ANTI-APOPTOTIC E -> Q (IN REF. 5).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AND ANTI-APOPTOTIC ACTIVITY.
D->A: ABOLISHES INHIBITION OF CASPASES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRT;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1403 AA
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.9e-1?;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           А.Н.,
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ray.";
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1 PEQLASAGEYYYGRNDDYKCFCCDGGLRCWESGDDPWYEHAKWFPRCE

Query Match Best Local S Matches 29

Similarity

63.1%; 159662 MW;

Score 186; DB Pred. No. 3.2e 6; Mismatches

DB 1; }.2e-15;

Length 1402;

Indels

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Gaps

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Conservative

SEQUENCE

DOMAIN REPEAT

464 1402

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C1DFFBA359893E0D CRC64;

REPEAT

BIR 1. BIR 2. BIR 3. NACHT

family

Repeat;

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Best Local :
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                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q9JIB3;
16-OCT-2001
16-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PROSITE; PS
PROSITE; PS
Apoptosis;
REPEAT
                                                             PROSITE;
PROSITE;
PROSITE;
                                                                                                                                                                                                                                                                                                         Genome Res.
                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A. MEDLINE-20414747; PubMed-10958627;
                                                                                                                                                                                                                                                                                                                                                                                                                 inhibitory protein 7).
BIRC1G OR NAIP7.
                                                                                                                                                                                                                                                                                                                                                                                                                                     16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
15-OTN-2002 (Rel. 41, Last annotation update)
Baculoviral IAP repeat-containing protein 1g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BIRG
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REPEAT
                                                                                                      EMBL; AF242433; AAF82749.1;
HSSP; Q13490; 1QBH.
MGD; MGI:1858256; Birclg.
InterPro; IPR001370; BIR.
Pfam; PF00653; BIR; 3.
                                                                                                                                                                        or send an email to license@isb-sib.ch).
                                                                                                                                                                                           the European Bioinformatics Institute. The use by non-profit institutions as long modified and this statement is not removed.
                                                                                                                                                                                                                               Endrizzi M.G.,
                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
                                                                                   SMART; SM00238; BIR; 3.
PROSITE; PS01282; BIR_REPEAT_1;
                                                                                                                                                                                                                                                                                               +
                                                                                                                                                                                                                                                                                                        Endrizzi M.G., Hadinoto V., Growney J.D., Mi
"Genomic sequence analysis of the mouse Naip
Genome Res. 10:1095-1102(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DOMAIN
                                                                                                                                                                                    entities requires a license agreement
                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                       Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 PEQLASAGFYYVGRNDDVKCFCCDGGLRCWESGDDPWVEHAKWFPRCE
                                                                                                                                                                                                                                                              SIMILARITY: CONTAINS 3 BIR REPEATS. SIMILARITY: CONTAINS 1 NACHT DOMAIN.
                                                                                                                                                                                                                                                                                              FUNCTION: PREVENTS MOTOR-NEURON APOPTOSIS INDUCED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRALSAAGFVFTGKRDTVQCFSCGGSLGNWEEGDDPWKEHAKWFPKCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             29;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PS50143;
PS50837;
                                                             PS50143; BIR_REPEAT_2; PS50837; NACHT; 1.
                                                                                                                                                                                                                             the Swiss Institute of Bioinformatics
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60
159
278
464
1403 AA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; Multigene family.
127 BIR 1.
227 BIR 2.
345 BIR 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        63.4%;
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                                                                                                                                                                                                                                                                                                                                                                                  Craniata; Vertebrata;
Sciurognathi; Muridae;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1402
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                                                                                                                                                                                                                             and the
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                                                                                                                                                                                                                                                                                                                   array.
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                                                                                                                                                                                                                                                                                                                                                                                  Euteleostomi; 
; Murinae; Mus
                                                                                                                                                                                                                                                                                                                   Dietrich W. ray.";
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PRVLSAAGFVFTGKRDTVQCFSCGGSLGNWEEGDDPWKEHAKWFPKCE

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RESULT 11

BIRA_MOUSE
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16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Baculoviral IAP repeat-containing protein la
inhibitory protein 1).
BIRCIA OR NAIP1 OR NAIP.
                                                                                                                                                                                         REPEAT
REPEAT
                                                                                                                                                                                                                                                                      PROSITE; PS01282; BIR_REPEAT_1; PROSITE; PS50143; BIR_REPEAT_2; PROSITE; PS50837; NACHT; 1.
                                                                                                                                                                                                                                                                                                                                  MGD; MGI:1298223; Bircla.
Interpro; IPR001370; BIR.
Pfam; PF00653; BIR; 3.
SMART; SM00238; BIR; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL; AF007769; AAB69223.1; -. EMBL; AF135491; AAD56763.1; -. EMBL; AF242432; AAF82752.1; -.
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Huang S., Scharf J.M., Growney J.D., Endria
"The mouse Naip gene cluster on Chromosome
functional transcripts.";
Mamm. Genome 10:1032-1035(1999).
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"Cloning and characterization of the multiple copies of the homologue of NAIP (neuronal apoptosis inhibitory protein).' Submitted (JUN-1997) to the EMBL/GenBank/DDBJ databases.
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een the Swiss Institute of Bioinformatics and the El
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MGD; MGI:1298220; Bircle. InterPro; IPR001370; BIR. Pfam; PF00653; BIR; 3. SMART; SM00238; BIR; 3.

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                                                                                               between the Swiss Institute of Bioinformat. the European Bioinformatics Institute. Their the European Bioinformatics Institutions as long to modified and this statement is not removed. entitles requires a license agreement (See lor send an email to license@isb-sib.ch).
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Endrizzi M., Huang S., Scharf J.M., Kelter A.R., Wirth B.,
Kunkel L.M., Miller W., Dietrich W.F.;
"Comparative sequence analysis of the mouse and human Lgn1/SMA
interval.";
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MEDLINE=99431676; PubMed=10501978;
Huang S., Scharf J.M., Growney J.D.
"The mouse Naip gene cluster on Ch
functional transcripts.";
Mamm. Genome 10:1032-1035(1999).
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Kunkel L.M., Dietric
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BIRCLE OR NAIP5 OR NAIP-RS3.
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Sciurognathi; Muridae;
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MEDLINE-99315342; PubMed-10384056;

Yaraghi Z., Diez E., Gros P., MacKenzie A.;

"CDNA cloning and the 5'genomic organization
gene for murine Legionella resistance.";

Mamm. Genome 10:761-763(1999).
                                                                                                                                                                                                                                                                               Q9QUK4; Q9R030; 009124;
16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Baculoviral IAP repeat-containing protein 1b
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                                         MEDLINE=99417674; PubMed=10486205;
Endrizzi M., Huang S., Scharf J.M.,
Kunkel L.M., Miller W., Dietrich W.)
"Comparative sequence analysis of ti
interval.";
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Mamm. Genome 10:1032-1035(1999).
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EMBL; AF135490; AAD56762.1; -.
EMBL; AF102871; AAC73002.1; -.
EMBL; AF131205; AAD56759.1; -.
EMBL; U66329; AAC52977.1; -.
HSSP; Q13490; 1QBH.
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Cydia pomonella granulosis virus (CpGV) (Cydia pomonella granulovirus).
Viruses; dsDNA viruses, no RNA stage; Baculoviridae; Gran
                                                     01-NOV-1995 (Rel. 32, Created)
01-NOV-1995 (Rel. 32, Last sequence up
15-JUN-2002 (Rel. 41, Last annotation
Apoptosis inhibitor IAP.
IAP.
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Apoptosis; Repeat; Multigene fau REPEAT 60 127 BI
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InterPro; IPR001841; 2nf_ring.
Pfam; PF00653; BIR; 2.
SMART; SM00238; BIR; 2.
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SMART; SM00184; RING; 1.
PR005ITE; PS01282; BIR_REPEAT_1; 2
PR0SITE; PS0143; BIR_REPEAT_2; 2
PR0SITE; PS00518; ZF_RING_1; FALSI
PR0SITE; PS00518; ZF_RING_2; 1.
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ZN_FING
SEQUENCE
                    MEDLINE=95112344; Pu
                                                                                                                                                                                                                                                                 BIR1_HUMAN STANDARD; PRT; 1403 AA. (213075; Q13730; Q99796; 075857; Q1-NOV-1997 (Rel. 35, Created) 16-OCT-2001 (Rel. 40, Last sequence update) 15-JUN-2002 (Rel. 41, Last annotation update) Baculoviral IAP repeat-containing protein 1 (15)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   J. Virol.
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Crook N.E., Clem R.J., Miller L.K.;
"An apoptosis-inhibiting baculovirus
motif.";
                                                                                                                                    Mammalia; Eutheria;
NCBI_TaxID-9606;
                                                                                                                                                                                Homo sapiens (Human)
Eukaryota; Metazoa;
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=95112344; PubMed=7813013;
Mahadevan M.S., McLean M.
i R., Baird S., Besner-Joh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
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Bioinformatics Institute. There are no rest
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31290 MW;
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    G., Yaraghi Z.,
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"Sequence of a 131-kb region of 5q13.1 arophy candidate genes SNN and NAIP.";
Genomics 48:121-127(1998).
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Xuan J.-Y.,
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Nature 379:349-353(1996).
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Anzevino R., Velona
Buys C.H.C.M.;
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Anzevino R., Velona I., Brahe C.,
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de Jong P.J., Surh
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Y., Kang X., Lefebvre C.,
                                                                                    IPR001370;
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C., Scheffer H.,
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Mackenzie A., Korneluk R.G.;
Walian cells by NAIP and a related
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553 Y -> H (IN REF. 3).

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	41.9	42.5	43.2	43.2	43.2	43.5	45.1	49.0	49.4	49.4	49.4	49.4	49.4	51.3	51.3	51.3	51.3	51.3
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ALIGNMENTS	US-08-511-485-20	US-08-511-485-21	US-09-493-784-22	US-08-836-134-22	US-08-511-485-28	US-08-511-485-26	US-08-511-485-27	PCT-US95-05922A-2	US-09-617-053A-10	US-08-800-929A-10	US-09-212-971-10	US-08-511-485-10	US-08-511-485-16	US-09-617-053A-4	US-08-800-929A-4	US-09-212-971-4	US-08-511-485-4	US-08-511-485-17
	Sequence 20, Appl	`	Sequence 22, Appl	-	•	Sequence 26, Appl	Sequence 27, Appl	Sequence 2, Appli			Sequence 10, Appl		Sequence 16, Appl	Sequence 4, Appli	Sequence 4, Appli	Sequence 4, Appli	Sequence 4, Appli	Sequence 17, Appl

RESULT 1 US-08-569-749-6

Sequence 6, Application US/08569749.
Patent No. 6187557
GENERAL INFORMATION:
APPLICANT: Rothe, Mike
APPLICANT: Goeddel, David V
TITLE OF INVENTION: INHIBITORS OF

NUMBER OF SEQUENCES:

APOPTOSIS

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; MOLECULE TYPE:
US-08-569-749-6
                                                                           Matches
                                                                                                            Query Match
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NAME: Brezner, David J.

REGISTRATION NUMBER: 24,774

REFERENCE/DOCKET NUMBER: A-6.

TELECOMMUNICATION INFORMATION:

TELEPHONE: (415)781-1989
                                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
LENGTH: 55 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                    TELEFAX: (415)398-3249 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
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                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
FILING DATE:
CLASSIFICATION: 514
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STREET: 4 Embarcadero Center,
CITY: San Francisco
STATE: California
                                                                                          Local
                 1 CELYRMSTYSTFPAGYPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKRGD5P 55
 CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKRGDSP
                                                                         Similarity
55; Conserv
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ilarity 100.0%;
Conservative (
                                                                                                                                                                    protein
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                                                                       Score 308; DB 4;
Pred. No. 6.9e-37;
; Mismatches 0;
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Best Local :
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GENERAL INFORMATION:
APPLICANT: TULARI
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                                                                                                                                                                                                                                       APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE CHARACTERISTICS:
LENGTH: 55 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPOTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: Patentin Release #1.0, CURRENT APPLICATION DATA:
                            COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                  CORRESPONDENCE ADDRESS:
ADDRESSEE: Fish & Richardson P.C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELECOMMUNICATION INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDIUM TYPE: Floppy
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                                                                                                                                                                                                   FITLE OF INVENTION: MAMMALIAN IAP GENE FAMILY, PRIMERS, FITLE OF INVENTION: PROBES, AND DETECTION METHODS
                                                                                                                                                                                       NUMBER OF SEQUENCES:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REGISTRATION NUMBER: 24,774
REFERENCE/DOCKET NUMBER: A-
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TOPOLOGY: lin
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COMPUTER: IBM PC
OPERATING SYSTEM:
                                                                 COUNTRY: USA
ZIP: 02110-2804
                                                                                                     STATE:
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                                                                                                                                                                                                                                                                                                                                                                                                           1 CELYRMSTYSTFPAGVPVSERSLARAGEYYTGVNDKVKCFCCGLMLDNWKRGDSP 55
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Similarity 100.0%;
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                                                                                                                                   225 Franklin Street
                                                                                                                                                                                                                                     Mackenzie, Alexander E.
Baird, Stephen
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PC-DOS/MS-DOS
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Pred. No. 6.9e-37;
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US-09-212-971-6
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                                                                                                                                                                                                                                                 EARLIER APPLICATION NUMBER: 60/017,354
EARLIER FILING DATE: 1996-04-26
EARLIER APPLICATION NUMBER: 60/030,590
EARLIER FILING DATE: 1996-11-14
EARLIER APPLICATION NUMBER: 08/800,929
                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION: DETECTION AND MODULATION OF IAPS AND TITLE OF INVENTION: NAIP FOR THE DIAGNOSIS AND TREATMENT OF PROLIFERATIVE TITLE OF INVENTION: DISEASE FILE REFERENCE: 07891/009002
                                                                                                                                                                                                                       NUMBER OF SEQ
                                                                                                                                                                                                                                                                                                                                CURRENT APPLICATION NUMBER: US/09/212,971B CURRENT FILING DATE: 1998-12-16
                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
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                                                                                                                                                                         LENGTH: 604
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LENGTH: 604 amino acids
TYPE: amino acid
STRANDEDNESS: not releva
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TELECOMMUNICATION INFORMATION:
TELEPHONE: 617/542-5070
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NAME: Clark, Paul T.
REGISTRATION NUMBER: 30,162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: PatentIn Relaction DATA: CURRENT APPLICATION NUMBER: US, FILING DATE: 04-AUG-19
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                                                              Local Similarity
les 55; Conserv
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TELEPHONE:
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Pratt, Christine
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Pred. No. 1.2e-35;
                                                              Score 308; DB 3;
Pred. No. 1.2e-35;
; Mismatches 0;
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RESULT 5 US-08-800-929A-6

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Best Local Similarity
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Patent No. 6133437
                                                                                                                                    GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
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TELECOMMUNICATION INFORMATION:
TELEPHONE: 617-428-0200
                                                                                 APPLICANT: Rothe, Mike
APPLICANT: Goeddel, David V
TITLE OF INVENTION: INHIBITORS OF APOPTOSIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION DATA:
APPLICATION NUMBER: 60/030,590
FILING DATE: 14-NOV-1996
APPLICATION NUMBER: 60/017,354
                                               CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY: 1: MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 26-APR-1996 ATTORNEY/AGENT INFORMATION:
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                                                                     NUMBER OF SEQUENCES:
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                                                                                                                                                                                                                                                      28 CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGIMLDNWKRGDSP 82
                                                                                                                                                                                                                                                                                                                                                                                                                                            STRANDEDNESS:
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REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US/08/800,929A FILING DATE: 13-FEB-1997
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SOFTWARE: FastSE(
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                 STREET:
                                                                                                                                                                                                                                                                                      1 CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKRGDSP 55
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Pratt, Christine
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Embarcadero Center, Suite 3400 Francisco
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                               FLEHR, HOHBACH, TEST, ALBRITTON & HERBERT
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GRGANISM: Homo sapiens US-09-617-053A-6
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US-09-617-053A-6
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                                                                       Matches
                                                                                                       Query Match
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SEQ ID NO 6
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                                                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: US 08/800,929
PRIOR FILING DATE: 1997-02-13
NUMBER OF SEQ ID NOS: 17
                                                                                                                                                                                                                                                                                          CURRENT APPLICATION NUMBER: US/09/617,053A
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                                                                                                                                                                         LENGTH: 604
TYPE: PRT
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TOPOLOGY: lin
MOLECULE TYPE:
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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28 CELYRMSTYSTFPAGVPVSERSLARAGEYYTGVNDKVKCFCCGLMLDNWKRGDSP 82
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                                                                     Local Similarity 100
les 55; Conservative
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                   1 CELYRMSTYSTFPAGYPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKRGDSP 55
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                                                                   100.0%; Score 308; DB 4; 100.0%; Pred. No. 1.2e-35; tive 0; Mismatches 0;
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Pred. No. 1.2e-35;
); Mismatches 0;
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DIAGNOSIS AND
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Patent No.
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INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                       APPLICANT: Goeddel, David V
TITLE OF INVENTION: INHIBITORS OF APOPTOSIS
NUMBER OF SEQUENCES: 14
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MEDIUM TYPE: Floppy disk
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CORRESPONDENCE ADDRESS:
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                                                                                                                                                                            STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                  NAME: Brezner, David J.
REGISTRATION NUMBER: 24,774
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OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
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5. 6187557
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1 Similarity 100.0%;
55; Conservative 0;
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F: 4 Embarcadero Center, Suite 3400
San Francisco
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linear
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06 AUG 1996
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Pred. No. 1.2e-35;
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                  Version #1.30
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                         Query Match
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GENERAL INFORMATION:
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                                                                                                                                                      TELEFAX: (415)398-3249 INFORMATION FOR SEQ ID NO:
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                                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION DATA:
APPLICATION NUMBER: PC'
FILING DATE: 06 AUG 19
                                                                                                                                                                                              NAME: Brezner, David J.
REGISTRATION NUMBER: 24,774
REFERENCE/DOCKET NUMBER: A-I
TELECOMMUNICATION INFORMATION:
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MEDIUM TYPE: Floppy disk
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TITLE OF INVENTION: INHIBITORS OF APOPTOSIS
NUMBER OF SEQUENCES: 14
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LENGTH: 55 amino acids
TYPE: amino acid
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CLASSIFICATION:
Local Similarity 98.: les 54; Conservative
                                                                                              STRANDEDNESS:
                                                                                                          TYPE: amino acids
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San Francisco
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06 AUG 1996
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98.2%;
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Score 301; DB 5;
Pred. No. 6.9e-36;
0; Mismatches 1
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                          DB 5; Length 55;
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                                                                                                                                                    Sequence 8, Apr-
Sequence 8, Apr-
No. 6107041
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                                                                                                                                                                                                                                                                                                                                                   Query Match
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APPLICANT: Tsang, Benjamin K
APPLICANT: PRATE, Christine
TITLE OF INVENTION: DETECTION AND MODULATION OF IAPS AND
TITLE OF INVENTION: WAIP FOR THE DIAGNOSIS AND TREATMENT OF PROLIFERATIVE
TITLE OF INVENTION: DISEASE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEX: 200154
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: Clark, Paul T.
REGISTRATION NUMBER: 30,162
REFERENCE/DOCKET NUMBER: 0754
TELECOMMUNICATION INFORMATION:
TELEPHONE: 617/542-5070
TELEFAX: 617/542-8906
                                                                             APPLICANT: Baird, Stephen
                                                                                                            APPLICANT: MacKenzie, Alexander
                                                                                                                              APPLICANT: Korneluk, Robert G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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APPLICANT: Mackenzie, Ale
APPLICANT: Baird, Stephen
                                                                                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE:
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TORNEY/ACCOUNT
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                                                                                                                                          INFORMATION:
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98.2%;
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No. 1.2e-34;
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GENERAL INFORMATION:
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LENGTH: 618
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Best Local
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EARLIER FILING DATE: 1996-04-26
EARLIER APPLICATION NUMBER: 60/030,590
EARLIER FILING DATE: 1996-11-14
EARLIER APPLICATION NUMBER: 08/800,929
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CURRENT FILING DATE: 1998-12-
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                              INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                     CLASSIFICATION: 424
PRIOR APPLICATION NUMBER
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                                                                                                                                                                                                                       APPLICATION NUMBER: 60/017,354
FILING DATE: 26-APR-1996
ATTORNEY/AGENT INFORMATION:
NAME: Bleker-Brady, Kristina
REGISTRATION NUMBER:
                                                                                                                              REFERENCE/DOCKET NUMBER: 07
TELECOMMUNICATION INFORMATION:
TELEPHONE: 617-428-0200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE: Clark & E
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: FastSEQ for CURRENT APPLICATION DATA:
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TITLE OF INVENTION:
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for Windows Version
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FOR THE DIAGNO
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RESULT 15
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                                                                                                                                                                                      Query Match
Best Local Similarity 98.2
                                           Sequence 8, Application US/09617053A Patent No. 6300492 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 2, Applic
Patent No. 6187557
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Best Local Similarity 98.2%;
APPLICANT: Korneluk, Robert G
APPLICANT: MacKenzie, Alexander E
APPLICANT: Liston, Peter
                                                                                                                                                                                                                                                                                                                                                          INFORMATION FOR SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                           SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                    TELEPHONE: (415)781-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTORNEY/AGENT INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: GOEddel, David V
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                       TYPE: amino acid
STRANDEDNESS: single
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                REGISTRATION NUMBER: 24,774
REFERENCE/DOCKET NUMBER: A-62464/DJB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: amino acid
STRANDEDNESS: single
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
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                                                                                                                                                                                                                                                                                                                                                                                                                                          Brezner, David J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Application US/08569749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            California
                                                                                                                                                                                                                                                                                                                           618 amino acids
                                                                                                                                                                                                                                                                                                                                                     (415)398-3249
(415)398-3249
TD NO: 2:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               USA
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98.2%;
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Pred. No. 1.2e-34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 301; DB 4;
Pred. No. 1.2e-34;
0; Mismatches 1
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; TYPE: PRT
; ORGANISM: HOMO sapiens
US-09-617-053A-8
Search completed: May 5, 2003, 16:09:10 Job time: 4.73848 secs
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                                                                                                                                                             Query Match
Best Local Similarity 98.2
Matches 54; Conservative
                                                                                                                                                                                                                                                                                                                                    SEQ ID NO 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION: DETECTION AND MODULATION OF IAPS AND TITLE OF INVENTION: NAIP FOR THE DIAGNOSIS AND TREATMENT OF PROLIFERATIVE TITLE OF INVENTION: DISEASE FILE REFERENCE: 07891/009003 CURRENT APPLICATION UMBER: US/09/617,053A
                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQ ID NOS: 17
SOFTWARE: FastSEQ for Windows Versión 4.0
                                                                                                                                                                                                                                                                                                                                                                                              CURRENT FILING DATE: 2000-07-14
PRIOR APPLICATION NUMBER: US 08/800,929
PRIOR FILING DATE: 1997-02-13
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                                                                                  45 CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKLGDSP 99
                                                                                                         1 CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKRGDSP
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Pratt, Christine
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98.2%;
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Pred. No. 1.2e-34;
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Result
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Maximum Match 100%
Listing first 45 s
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1 DB seq
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1 CELYRMSTYSTEPAGYPVSE.....KVKCFCCGLMLDNWKRGDSP 55
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               Query
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GenCore version 5.1.4_p5_4578 Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5, 2003, 16:02:07 ; Search time 6.77995 Seconds (withour alignments) 699.970 Million cell updates/sec
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/cgn2_6/ptodata/2/pubpaa/US09_NEW_PUB.pep:*
/cgn2_6/ptodata/2/pubpaa/US10_NEW_PUB.pep:*
/cgn2_6/ptodata/2/pubpaa/US10_FUBCOMB.pep:*
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/cgn2_6/ptodata/2/pubpaa/PCT_NEW_PUB.pep:*
/cgn2_6/ptodata/2/pubpaa/US06_NEW_PUB.pep:*
/cgn2_6/ptodata/2/pubpaa/US06_PUBCOMB.pep:*
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            9 US-09-201-936-8

US-09-974-592-8

US-09-201-936-12

US-09-201-936-12

US-09-974-592-14

US-09-201-936-10

US-09-201-936-10

US-09-201-936-17

US-09-201-936-17

US-09-965-967-22

9 US-09-965-967-22

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9 US-09-968-968-4
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US-09-974-592-6
US-09-778-927A-62
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Sequence 18, Appli
Sequence 11, Appli
Sequence 12, Appli
Sequence 12, Appli
Sequence 17, Appli
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Sequence 4, Appli
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Sequence 16, Appli
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Sequence
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-	Sequence 10, Appl	16,	19,	11,			e 25,	24	Sequence 23, Appl	Sequence 2, Appl1	Sequence 8, Appl1	-	`	`	Sequence 22, Appl	•	`	•	`	21,	•				Sequence 27, Appl	

ALIGNMENTS

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TITLE OF INVENTION: MAMMALIAN IAP GENE FAMILY, PRIMERS,
TITLE OF INVENTION: PROBES, AND DETECTION METHODS
FILE REFERENCE: 07891,003003
CURRENT APPLICATION NUMBER: US/09/201,936
CURRENT FILING DATE: 1998-12-01
EARLIER APPLICATION NUMBER: 09/011,356
EARLIER FILING DATE: 1998-02-04
EARLIER APPLICATION NUMBER: PCT/IB96/01022
EARLIER APPLICATION NUMBER: 08/576,956
EARLIER APPLICATION NUMBER: 08/576,956
EARLIER FILING DATE: 1995-08-05
EARLIER FILING DATE: 1995-08-04
EARLIER FILING DATE: 1995-08-04
EARLIER FILING DATE: 1995-08-04
                    RESULT 2
US-09-974-592-6
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  ; Sequence
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Matches
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                                                                                                                                                                                                                                                                                                                                           SOFTWARE: FastSEQ for Windows Version 3.0 SEQ ID NO 6 LENGTH: 604
                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Korneluk, Robert G.
APPLICANT: MacKenzie, Alexander E.
APPLICANT: Baird, Stephen
APPLICANT: Liston, Peter
                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                LENGTH: 604
TYPE: PRT
ORGANISM: Homo sapiens
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                                                                                                      6, Application US/09974592
                                                                                                                                                                                           Similarity
55; Conserv
                                                                                                                                                                                         100.0%; Score 308; DB 9; llarity 100.0%; Pred. No. 9.7e-33; Conservative 0; Mismatches 0;
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; FEATURE:

NAME/KEY: misc_feature
; LOCATION: (1):.(306 )
; OTHER INFORMATION: Xaa = any amino acid, unknown, US-09-778-927A-62
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RESULT 4
US-09-201-936-8
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: SOFTWARE: PatentIn Ver. 2.1
: SEQ ID NO 62
: LENGTH: 306
: TYPE: PRT
: ORGANISM: Homo sapiens
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US-09-974-592-6
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                             CURRENT FILING DATE: 2001-02-08
PRIOR APPLICATION NUMBER: IL 134453
PRIOR FILING DATE: 2000-02-09
PRIOR APPLICATION NUMBER: IL135341
PRIOR FILING DATE: 2000-03-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION NUMBER: US/09/778,927A CURRENT FILING DATE: 2001-02-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: KHOSRAVI, Rami et al.
TITLE OF INVENTION: WOVEL NUCLEIC ACID AND AMINO ACID SEQUENCES AND NOVEL
TITLE OF INVENTION: VARIANTS OF ALTERNATIVE SPLECING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION NUMBER: US/09/974,592
CURRENT FILING DATE: 2001-10-09
PRIOR APPLICATION NUMBER: US 09/617,053
PRIOR FILING DATE: 2000-07-14
PRIOR APPLICATION NUMBER: US 08/800,929
PRIOR FILING DATE: 1997-02-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION: DETECTION AND MODULATION ON TAPS AND TITLE OF INVENTION: NAIP FOR THE DIAGNOSIS AND TREATMENT OF PROLIFERATIVE TITLE OF INVENTION: DISEASE FILE REFERENCE: 07891/009004
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TYPE: PRT
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                                                                      CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKLGDSP 99
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Pratt, Christine
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Baird, Stephen
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                                                                                                                                             Score 301; DB Pred. No. 3.9e 0; Mismatches
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                                                                                                                                                ; TYPE: PRT ; ORGANISM: Homo sapiens US-09-974-592-8
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                                                                                                                                                                                                       SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 8
LENGTH: 618
                                                                         Matches
                                                                                           Query Match
Best Local
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                                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION NUMBER: US/09/974,592
CURRENT FILING DATE: 2001-10-09
PRIOR APPLICATION NUMBER: US 09/617,053
PRIOR FILING DATE: 2000-07-14
                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: US 08/800,929
PRIOR FILING DATE: 1997-02-13
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Tsang, Benjamin K
APPLICANT: Pratt, Christine
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EARLIER FILING DATE: 1995-08-04
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                                                                                                                                                                                                                                                                       NUMBER OF SEQ ID NOS:
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EARLIER APPLICATION NUMBER: 09/011,356
EARLIER FILING DATE: 1998-02-04
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                                                                                                                                                                                                                                                                                                                                                                                                         FILE REFERENCE: 07891/009004
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TYPE: PRT
ORGANISM: Homo sapiens
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                1 CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKRGDSP 55
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CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKLGDSP 99
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JS20020120121A1
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98.2%;
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98.2%;
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                                                                                           Score 301; DB 10; Pred. No. 8.5e-32;
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Pred. No. 8.5e-32;
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US-09-201-936-18

Application US/09201936

US20020187946A1

Sequence 18, Application No. US20 GENERAL INFORMATION:

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                                                                     ; ORGANISM: Mus
US-09-201-936-42
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US-09-201-936-18
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CURRENT FILING DATE: 1998-12-01
EARLIER APPLICATION NUMBER: 09/01,356
EARLIER FILING DATE: 1998-02-04
EARLIER APPLICATION NUMBER: PCT/IB96/01022
EARLIER FILING DATE: 1996-08-05
EARLIER APPLICATION NUMBER: 08/576,956
EARLIER FILING DATE: 1995-12-22
EARLIER FILING DATE: 1995-08-04

EARLIER APPLICATION NUMBER: 08/511,485
EARLIER APPLICATION NUMBER: 08/511,485
                                                                                                                                                                                                                                  EARLIER APPLICATION NUMBER: 09/011,356
EARLIER FILING DATE: 1998-02-04
EARLIER APPLICATION NUMBER: PCT/IB96/01022
EARLIER FILING DATE: 1996-08-05
EARLIER APPLICATION NUMBER: 08/576,956
EARLIER FILING DATE: 1995-12-22
EARLIER APPLICATION NUMBER: 08/511,485
EARLIER APPLICATION NUMBER: 08/511,485
EARLIER FILING DATE: 1995-08-04
                                                                                                                                    SOFTWARE: FastSEQ for Windows Version 3.0 SEQ ID NO 42 LENGTH: 591
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LENGTH: 68
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Best Local S
Query Match
Best Local Similarity
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CURRENT APPLICATION NUMBER: US/09/201,936

CURRENT FILING DATE: 1998-12-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Korneluk, Robert G.
APPLICANT: MacKenzie, Alexander E.
APPLICANT: Baird, Stephen
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SOFTWARE: FastSEQ for Windows Version 3.0
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TITLE OF INVENTION: PROBES, AND DETECTION METHODS
FILE REFERENCE: 07891/003003
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                                                                                                                                                                                                                    NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: PRT
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  95.5%;
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Pred. No.
  Score 294; DB 9;
Pred. No. 6.9e-31;
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                      Length 591;
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                                                           SOFTWARE: FastSEQ for Windows Version 3.0 SEQ ID NO 19
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Best Local Similarity
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LENGTH: 612
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
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                                                                                                                                                                EARLIER FILING DATE: 1998-02-04
EARLIER APPLICATION NUMBER: PCT/IB96/0:
EARLIER FILING DATE: 1996-08-05
EARLIER APPLICATION NUMBER: 08/576,956
EARLIER FILING DATE: 1995-12-22
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                                                                                                         NUMBER OF SEQ ID NOS:
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EARLIER APPLICATION NUMBER: 09/011,356
                                                                                                                                                                                                                                                                                                                      CURRENT
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ORGANISM: Homo sapiens
                                       LENGTH: 68
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                                                                                                                        APPLICATION NUMBER: 08/511,485 FILING DATE: 1995-08-04
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Pratt, Christine
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Pred. No. 7
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TITLE OF INVENTION: MAMMALIAN TAP GENE FAMILY, PRIME TITLE OF INVENTION: PROBES, AND DETECTION METHODS FILE REFERENCE: 07891/003003
CURRENT APPLICATION NUMBER: US/09/201,936
CURRENT FILING DATE: 1998-12-01
EARLIER APPLICATION NUMBER: 09/011,356
EARLIER APPLICATION NUMBER: 09/01032
EARLIER APPLICATION NUMBER: PCT/IB96/01022
EARLIER APPLICATION NUMBER: 08/576,956
EARLIER APPLICATION NUMBER: 08/576,956
EARLIER APPLICATION NUMBER: 08/511,485
EARLIER APPLICATION NUMBER: 08/511,485
EARLIER ETLING DATE: 1995-08-04
NUMBER OF SEQ ID NOS: 45
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US-09-201-936-40
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US-09-974-592-12
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: US 09/617,053
PRIOR FILING DATE: 2000-07-14
PRIOR APPLICATION NUMBER: US 08/800,929
PRIOR FILING DATE: 1997-02-13
NUMBER OF SEQ ID NOS: 17
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 12
                                                                                                                                                                                                                                                                                                                                                                              Sequence 40, Application US/09201936 Publication No. US20020187946A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                               APPLICANT: MacKenzie, Alexander E. APPLICANT: Baird, Stephen APPLICANT: Liston, Peter
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION NUMBER: US/09/974,592
CURRENT FILING DATE: 2001-10-09
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION: DETECTION AND MODULATION OF TAPS AND TITLE OF INVENTION: NAIP FOR THE DIAGNOSIS AND TREATMENT OF PROLIFERATIVE TITLE OF INVENTION: DISEASE FILE REFERENCE: 07891/009004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                        APPLICANT: Korneluk, Robert G.
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Pratt, Christine
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Baird, Stephen
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for Windows Version 3.0
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98.1%;
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Pred. No. 6e-30;
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Pred. No. 1.1e-31;
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; ORGANISM: Homo sapiens US-09-201-936-17
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CURRENT FILING DATE: 1998-12-01
EARLIER APPLICATION NUMBER: 09/01,356
EARLIER FILING DATE: 1998-02-04
EARLIER APPLICATION NUMBER: PCT/IB96/01022
EARLIER FILING DATE: 1996-08-05
EARLIER FILING DATE: 1996-08-05
EARLIER FILING DATE: 1995-12-22
EARLIER FILING DATE: 1995-12-22
EARLIER APPLICATION NUMBER: 08/511,485
EARLIER APPLICATION NUMBER: 08/511,485
EARLIER FILING DATE: 1995-08-04
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQ ID NOS: 45
SOFTWARE: FASTSEQ for Windows Version 3.0
SEQ ID NO 17
LENGTH: 68
TYPE: PRT
                                                                                                                                                                                                                                                                          Sequence 22, Application US/09965967 Patent No. US20020177557A1 GENERAL INFORMATION:
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Best Local Similarity
                  SOFTWARE: PatentIn version 3.1 SEQ ID NO 22
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                                                                          APPLICANT: Shi, Yigong
TITLE OF INVENTION: Compositions and Methods For Regulating Apoptosis
FILE REFERENCE: PU 0031 (01-1739-1)
CURRENT APPLICATION NUMBER: US/09/95,967
CURRENT FILING DATE: 2001-09-28
CURRENT FILING DATE: 2001-09-28
PRIOR APPLICATION NUMBER: 60/235,574
PRIOR FILING DATE: 2000-09-29
PRIOR APPLICATION NUMBER: 60/256,830
PRIOR APPLICATION NUMBER: 60/256,830
PRIOR FILING DATE: 2000-12-20
NUMBER OF SEC TO NOG. 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Baird, Stephen
APPLICANT: Liston, Peter
TITLE OF INVENTION: MAMMALIAN IAP GENE FAMILY, PRIMERS,
TITLE OF INVENTION: PROBES, AND DETECTION METHODS
FILE REFERENCE: 07891/003003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Korneluk, Robert G. APPLICANT: MacKenzie, Alexander E.
                                                             NUMBER OF SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: PRT
LENGTH:
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  110
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Pred. No. (
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US-09-974-592-4
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Best Local Similarity
Matches 28; Conserva
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SEQ ID NO 4
LENGTH: 497
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Best Local Similarity 52.8%;
Matches 28; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                               Sequence 4, Application US/09974592
Patent No. US20020120121A1
                                                                APPLICANT: Pratt, Christine
ITITE OF INVENTION: DETECTION AND MODULATION OF TAPS AND
TITLE OF INVENTION: UAIF FOR THE DIAGNOSIS AND THEATMENT OF PROLIFERATIVE
TITLE OF INVENTION: DISEASE
TILE REFERENCE: 07891/009004
CURRENT APPLICATION NUMBER: US/09/974,592
CURRENT FILING DATE: 2001-10-09
CURRENT FILING DATE: 2001-10-09
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APPLICANT: MacKenzie, Alexande
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CURRENT FILING DATE: 1998-12-01
EARLIER APPLICATION NUMBER: 09/01,356
EARLIER FILING DATE: 1998-02-04
PRIOR APPLICATION NUMBER: US 08/800,929 PRIOR FILING DATE: 1997-02-13
                                               PRIOR APPLICATION NUMBER: US 09/617,053 PRIOR FILING DATE: 2000-07-14
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ZARLIER FILING DATE: 1996-08-05
ZARLIER APPLICATION NUMBER: 08/576,956
ZARLIER FILING DATE: 1995-12-22
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Baird, Stephen APPLICANT: Liston, Peter
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                                                                                                                                                                                                                                                                                                                                                                               INFORMATION
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Pratt, Christine
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Liston, Peter
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Pred. No. 1.3e-13;
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Search completed: May 5, 2003, 16:11:05
Job time: 7.77995 secs

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GenCore version 5.1.4_p5_4578 Copyright (c) 1993 - 2003 Compugen Ltd.
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8 protein protein search, using sw model

Run on: Мау 5, 2003, 15:58:42; Search time 6.01959 Seconds (without alignments) 878.365 Million cell updates/sec

Title: Perfect score: US-08-569-749-6 308

Sequence: CELYRMSTYSTFPAGVPVSE.....KVKCFCCGLMLDNWKRGDSP 55

Scoring table: BLOSUM62 Gapop 10.0 ,

Gapext 0.5

Searched: 283224 seqs, 96134422 residues

Total number of hits satisfying chosen parameters: 283224

Minimum DB Maximum DB seq length: 0 length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 s

summaries

Database PIR_73:* pir2:* ir1:*

score and is Pred. No. is No. is the number of results predicted by chance to have a greater than or equal to the score of the result being printed, serived by analysis of the total score distribution.

SUMMARIES

Result

Query Match

97.7%; Score 301;

DB <u>ب</u>

Length 618;

	45	44	43	42	41	40	39	38	37	36	35	34	ω ω	32	<u>د</u>	30
	54.5	55	55	55	55	55	55	55	55.5	55.5	56.5	57	57	57	57	57
	17.7	17.9	17.9	17.9	17.9	17.9	17.9	17.9	18.0	18.0	18.3	18.5	18.5	18.5	18.5	18.5
	155	1156	422	422	422	422	422	249	618	617	1192	1930	1401	1401	707	187
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	T37471	T14899	B90327	H90501	H90275	H90271	G90259	H72858	A35827	S10511	G70513	F86200	T30247	T17452	T40070	F86029
• •	apoptosis inhibito	aminophospholipid	hypothetical prote	hypothetical prote	hypothetical prote	hypothetical prote	hypothetical prote	apoptosis inhibito	thrombin (EC 3.4.2	thrombin (EC 3.4.2	5-methyltetrahydro	protein F12K11.17	Werner syndrome pr	Werner syndrome pr	origin recognition	3-methyladenine DN

ALIGNMENTS

A; Description: apoptotic suppressor C; Superfamily: RING finger homology C; Keywords: apoptosis; zinc finger F; 567-611/Domain: RING finger homology <RNG> R;Liston, P.; Roy, N.; Tamai, K.; Lefebvre, C.; Baird, S.; Cherton-Horvat, G.; Farah, Nature 379, 349-353, 1996
A;Title: Suppression of apoptosis in mammalian cells by NAIP and a related family of A;Reference number: A58182; MUID:96149249; PMID:8552191
A;Recession: S68449 apoptosis inhibitor hiap-2 - human
C;Species: Homo sapiens (man)
C;Date: 17-Jul-1998 #sequence_revision 17-Jul-1998 #text_change 21-Jul-2000 A;Description: apoptotic suppressor C;Superfamily: RING finger homology C;Keywords: apoptosis; zinc finger F;553-597/Domain: RING finger homology <RNG> apoptosis inhibitor hiap-1 - human (;Speckes: Homo sapiens (man) (;Speckes: Homo sapiens (man) (;Cpate: 17-Jul-1998 #sequence_revision 17-Jul-1998 #text_change 21-Jul-2000 (;Accession: \$68449 A;Cross-references: EMBL:U45879; NID:g1184317; PIDN:AAC50372.1; PID:g1184318 C;Function: A;Status: nucleic acid sequence not shown A;Molecule type: mRNA A;Residues: 1-618 <LIS> R;Liston, P.; Roy, N.; Tamai, K.; Lefebvre, C.; Baird, S.; Cherton-Horvat, G.; Farah. Nature 379, 349-353, 1996
A;Title: Suppression of apoptosis in mammalian cells by NAIP and a related family of A;Reference number: A58182; MUID:96149249; PMID:8552191 밁 Ş A;Cross-references: C;Function: A;Status: nucleic acid sequence not shown A;Molecule type: mRNA A;Residues: 1-604 <LIS> A; Accession: S68450 Accession: S68450 Matches Query Match 28 Local 1 CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKRGDSP 55 Similarity Roy, N.; Tamai, K.; Lefebvre, C.; Baird, S.; Cherton-Horvat, G.; Faraha 100.0%; Score 308; DB 2; ilarity 100.0%; Pred. No. 2.4e-31; Conservative 0; Mismatches 0: EMBL: U45878; NID: g1184315; PIDN: AAC50371.1; PID: g1184316 Length 604; Indels 0 Gaps 0; Faraha

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A;Cross-references: GB:U79142; NID:g2957174; PIDN:AAC39171.1; PID:g2957175 C;Superfamily: RING finger homology <RRN>
                                                                                                                                                                                                                                                                                Biochem. Biophys. Res. Commun. 243, 827-832, 1230
Biochem. Biophys. Res. Commun. 243, 827-832, 1230
A:Title: Cytokine induced expression of porcine inhibitor
A:Paference number: JC5964; MOID:98162622; PMID:9501011
                                                                                                                                                                                                                                                                                                                                                        apoptosis inhibitor - pig
c;Speciles: Sus scrofa domestica (domestic pig)
C;Date: 04-Sep-1998 #sequence_revision 04-Sep-1998 #text_change 02-Sep-2000
C;Accession: JC5964
R;Stehlik, C.; de Martin, R.; Binder, B.R.; Lipp, J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Description: apoptotic suppressor
C;Superfamily: apoptosis inhibitor IAP homolog;
C;Keywords: apoptosis; zinc finger
F;446-490/Domain: RING finger homology <RRN>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Status, ....
A; Molecule type: mRNA
A; Residues: 1-161, 'C',163-422, 'Q',424-497 <IIS>
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A;Title: Suppression of apoptosis in mammalian cells by A;Reference number: A58182; MUID:96149249; PMID:8552191
A;Accession: S68451
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A;Title: A conserved family of cellular genes related to the A;Reference number: S69544; MUID:96256286; PMID:8654366
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C;Date: 06-Dec-1996 #sequence_revision 13-Mar-199? #text_change 17-Nov-2000
C;Accession: S69544; S68451
                                                                                                                                                                                                             A; Molecule type: DNA
A; Residues: 1-358 <STE>
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A; Residues: 1-497 < DUC>
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Best Local :
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RMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKRGDSP 55
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25; Conserv
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52.8%;
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49.0%;
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                                                                                  Score 141;
Pred. No. 3
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Pred. No. 3e-12;
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.2e-10;
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A; Molecule type: m A; Residues: 1-1232 A; Reference number: A; Accession: A55478

A; Title: The gene for neuronal apoptosis inhibitory protein A; Reference number: A55478; MUID:95112344; PMID:7813013

R;Roy, N.; Mahadevan, M.S.; McLean, M.; d, T.O.; de Jong, P.J.; Surh, L.; Ikeda Cell 80, 167-178, 1995

Ikeda,

Shutler, G.; Yaraghi, Z.; Farahan , J.E.; Korneluk, R.G.; MacKenzie,

Farahani,

R.,

Baird

is

partially deleted

'n

C; Accession: A55478

C;Species: Homo sapiens (man)
C;Date: 05-Jan-1996 #sequence_revision 05-Jan-1996 #text_change 02-Feb-2001

neuronal apoptosis N;Alternate names:

inhibitory protein -

human

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                                                                                                                                                                                                                                                                      A; Molecule type: DNA
A; Residues: 1-268 <BIR>
                                                                                                                                                                                                                                                                                                                                         J. Virol. 68, 2521-2528, 1994
A;Titie: An apoptosis inhibiting gene from a nuclear polyhedrosis virus A;Reference number: A53989; MUID:94187094; PMID:8139034
A;Accession: A53989
                                                                                                                                                                                                                                                                                                                                                                                                                                                       C; Accession: A53989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            apoptosis-inhibiting protein - Orgyia pseudotsugata multicapsid nuclear polyhedrosis
C;Species: Orgyia pseudotsugata multicapsid nuclear polyhedrosis virus, OpMNPV
C;Date: 15-Oct-1994 #sequence_revision 15-Oct-1994 #text_change 15-Sep-2000
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C;Superfamily: viral apoptosis inhibitor IAP; RING finger homology
F;217-261/Domain: RING finger homology <RRN>
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A; Residues: 1-268 < AHR>
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A;Title: The sequence of the Orgyia pseudotsugata multinucleocapsid nuclear polyhedro A;Reference number: Z17011; MUID:97271300; PMID:9126251

A;Accession: T10304
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C; Date: 16-Jul-1999
C; Accession: T10304
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C;Species: Orgyla pseudotsugata nuclear polyhedrosis virus, OpMNPV
C;Date: 16-Jul-1999 #sequence_revision 16-Jul-1999 #text_change 15-Sep-2000
                                                                                                                                                                                217-261/Domain: RING finger homology <RRN>
                                                                                                                                     Query Match
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111 EAARLRTFAEWPRGLKQRPEELAEAGFFYTGQGDKTRCFCCDGGLKDWEPDDAP
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                                             2 ELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKRGDSP
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                                                                                          23; Conserv
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23; Conserv
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                                                                                                             43.2%;
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Pred. No. 2.6e-09;
Pred. No. 2.1; -
11 cmatches 21;
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Pred. No. 2
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                                                                                        Mismatches
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A;Cross-references: GB:U19251
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C:Keywords: apoptosis; ATP; gly
F:94-110/Domain: transmembrane
                                                                                                                                                                                                    A; Molecule type: mRNA
A; Residues: 1-1447 < YAR>
                                                                                                                                                                                                                                                        A; Reference number: A; Accession: T42628
                                                                                                                                                                                                                                                                         A; Title: CDNA cloning and the 5'genomic organization of Naip2, A; Reference number: Z22179; MUID:99315342; PMID:10384056
                                                                                                                                                                                                                                                                                                            R; Yaraghi, Z.; Diez, E.; Gros, P.; MacKenzie, A. Mamm. Genome 10, 761-763, 1999
                                                                                                                                                                                                                                                                                                                                                                C;Species: Mus musculus (house mouse)
C;Date: 11-Jan-2000 #sequence_revision 11-Jan-2000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              R;Bahr, U.; Tidona, C.A.; Darai, G.
Virus Genes 15, 235-245, 1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              probable apoptosis inhibitor - Chilo iridescent virus
C;Species: Chilo iridescent virus
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                                                                                                                                                                                                                                     A; Status: preliminary; translated
                                                                                                                                                                                                                                                                                                                                                                                                       neuronal apoptosis inhibitory protein 2
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:618,632,823,923,1035/Binding site: carbohydrate (Asn) (covalent) #status
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                                                                                                                                                                                 Cross-references: EMBL:AF102871; NID:g3860228; PID:g3860229; PIDN:AAC73002.1
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EELRMDTFKDWPHESPGAVEALVKAGLFYTGKRDIVQCFSCGGCMEKWAEGDNP
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22; Conserv
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Pred. No. 1.3e
10; Mismatches
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Pred. No. 1.6e-08;
2; Mismatches 18
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Pred. No. 4.6e-08;
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L; Mismatches
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apoptosis inhibitor diap - fruit fly (Drosophila melanogaster) C;Species: Drosophila melanogaster C;Date: 17-Jul-1998 #sequence_revision 17-Jul-1998 #text_chang C;Accession: S68452; S78528 R;Liston, P.; Roy, N.; Tamai, K.; Lefebvre, C.; Baird, S.; Che
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Cross-references: GB:L05494; NID:g289583; PIDN:AAA43835.1; PID:g289584 A;Note: sequence extracted from NCBI backbone (NCBIN:127014, NCBIP:127015) C;Superfamily: viral apoptosis inhibitor IAP; RING finger homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                inhibitor-of-apoptosis polypeptide (IAP) - Cydia C;Speckes: Cydia pomonella granulosis virus CpGV C;Date: 21-Sep-1993 #sequence_revision 25-Apr-199 C;Accession: A45679
                                             A; Reference number: A58182; A; Accession: S68452
                                                                            R;Liston, P.; Roy, N.; Tamaı, N.; Leteuvie, V., Wature 379, 349-333, 1996
A;Title: Suppression of apoptosis in mammalian cells
A;Title: Suppression of apoptosis in mammalian cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  J. Virol. 67, 2168-2174, 1993
A;Title: An apoptosis-inhibiting baculovirus gene with a zinc
A;Reference number: A45679; MUID:93188168; PMID:8445726
A;Accession: A45679
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Biochem. Biophys. Res. Commun. 279, 820-831, 2000
A;Title: KIAP, a novel member of the inhibitor of apoptosis
A;Reference number: JC7568; MUID: 21092523; PMID:11162435
A;Contents: Fetal kidney
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C;Species: Homo sapiens (man)
C;Date: 30-Jun-2001 #sequence_revision 30-Jun-2001 #text_change 30-Jun-2001
                     A; Status: nucleic acid sequence
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A; Molecule type: mRNA
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A; Residues: 1-298 <LIN>
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19; Conserv
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Pred. No. 6.5e-06;
4; Mismatches 20;
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Pred. No. 4.1e-08;
9; Mismatches 21
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PMID:8552191
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                                                                                                                                          Baird, S.; Cherton-Horvat, G.; Faraha
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ORF MSV248 probable inhibitor of apoptosis protein (IAP) - Melanoplus sanguinipes entomoc; Species: Melanoplus sanguinipes entomopoxvirus
C;Date: 21-Jan-2000 #sequence_revision 21-Jan-2000 #text_change 21-Jul-2000
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                                                                                                           R;Afonso, C.L.; Tulman, E.R.; Lu, Z.; Oma, E.; Kutish, G.F.; Virol. 73, 533-552, 1999
A;Title: The genome of Melanoplus sanguinipes entomcpoxvirus. A;Reference number: 220484; MUID:99102612; PMID:9847359
A;Accession: T28409
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A;Title: A conserved family of cellular genes relared to the baculovirus iap gene and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C;Date: 06-Dec-1996 #sequence_revision 13-Mar-1997 #text_change 21-Jan-2000
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C; Species: Drosophila
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Molecule type: mRNA
A;Residues: 1-36,'AT',37,'K',39,'L',41-44,'H',46-58,'Q',60-412,'A',414-427,'A',429-496
A;Cross-references: EMBL:U45881; NID:g1184313; PIDN:AAC46988.1; PID:g1184314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           submitted to the EMBL Data A; Reference number: $78528 A; Accession: $78528
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Title: A conserved family of cellular genes relaxed to the baculovirus iap gene and A;Reference number: S69544; MUID:96256286; PMID:8654366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Cross-references: FlyBase:FBgn0015247
                                  A;Residues:
                                                       A; Molecule type: DNA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4;Cross-references: EMBL:U32373; NID:g1019116; PIDN:AAC47155.1; PID:g1019117
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                                                                              Status: preliminary; translated from GB/EMBL/DDBJ
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Cross-references:
                                                                                                                                                                                                                                                      Accession: T28409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Superfamily: apoptosis inhibitor IAP homolog; RING finger homology 446-490/Domain: RING finger homology <RRN>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                       211 CVDARLRTFTDWPISNIQPASALAQAGLYYQKIGDQVRCFH;NIGLRSWQKEDEP 265
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Pred. No. 1.3e-05;
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  NID: 94049647; PIDN: AAC97724.1;
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Search completed: May Job time: 7.01959 sec

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Query Match

33.1%;

Score

102;

DB 2;

Length 150;

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A;Molecule type: DNA
A;Residues: 1-275 <AHR>
A;Residues: 1-275 <AHR>
A;Cross-references: EMBL:U75930; NID:g2934903; PIDN:AAC59040.1; PID:g1911287
C;Superfamily: viral apoptosis inhibitor IAP; RING finger homology
F;223-268/Domain: RING finger homology <RRN>
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A;Title: The sequence of the Orgyia pseudotsugata multinucleocapsid A;Reference number: 217011; MUID:97271300; PMID:9126251

A;Accession: T10310
                                                                                                                                                                                                                                                                                                                                                                                                                                           apoptosis-inhibiting protein 1 - Orgyia pseudotsugata nuclear polyhedrosis virus
C;Species: Orgyia pseudotsugata nuclear polyhedrosis virus, OpMNPV
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C;Date: 16-Jul-1999
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                    5 RMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKRGDSP
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                                                                                  Conservative
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Pred. No. 0.00026;
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GenCore version 5.1.4_p5_4578 Copyright (c) 1993 - 2003 Compugen Ltd.
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OM protein - protein search, using sw model

Run on: May 5, 2003, 15:51:32; Search time 2.28111 Seconds (without alignments) 1000.040 Million cell updates/sec

Title: Perfect score: Sequence: US-08-569-749-6
308
1 CELYRMSTYSTEPAGVPVSE......KVKCFCCGLMLDNWKRGDSP 55

Scoring table: BLOSUM62 Gapop 10.0 , Gapext 0.5

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Total number of hits satisfying chosen parameters: Searched: 112892 seqs, 41476328 residues

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database : SwissProt_40:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

29 30 31 32 33	20 22 23 24 27	14 17 18 19	7 8 9 10 11 12 13		20
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27						_	_				african swi

ALIGNMENTS

RP SEQUENCE FROM N.A. RA HOTTEVOETS A.J., FONTIJN R.D. RA HOTTEVOETS A.J., FONTIJN R.D. RA TEN CATE J.W., Pannekoek H.; RT "Vascular endothelial genes RT factor-alpha in vitro are ex RT including inhibitor of apopt RT genes."; RL Blood 93:3418-3431(1999). RN [5] RN SEQUENCE OF 362-441 FROM N.A. MEDLINE-20519161; PubMed-110 RA Baens M., Steyls A., Dierlam RT "Structure of the MIT gene a genomic breakpoint junctions		RN [1] RP SEQUENCE FROM N.A. RX MEDLINE-96128127; PubMed- RX Rothe M., Pan MG., Henz RT "The TNFR2-TRAF signaling RT to baculoviral inhibitor RT to baculoviral inhibitor RT Cell 83:1243-1252(1995). RN [2] RP SEQUENCE FROM N.A. ROTISSUE-Liver; RC TISSUE-Liver; RX MEDLINE-96149249; PubMed- RX Liston P., ROY N., Tamai RA Farahani R., McLean M., I RT "Suppression of apoptosis RT family of IAP genes."; RL Nature 379:349-353(1996). RN [3]	SULT 1 BIR2_HUMAN BIR2_HUMAN G1348; Q16 G1-NOV-1997 O1-NOV-1997 15-JUN-2002 Baculoviral protein 1) protein 1) protein 1) bIRC2 OR AP Homo sapien Eukaryota; Mammaila; E NCBI_TaxID-
SEQUENCE FROM N.A. MEDLINE=99252096; PubMed=10233894; Horrevoets A.J., Fontijn R.D., van Zonneveld A.J., de Vries C.J., ten Cate J.W., Pannekoek H.; "Vascular endothelial genes that are responsive to tumor necrosis factor-alpha in vitro are expressed in atherosclerotic lesions, including inhibitor of apoptosis protein-1, stannin, and two novel genes."; Blood 93:3418-3431(1999). [5] SEQUENCE OF 362-441 FROM N.A. MEDLINE=20519161; PubMed=1106071; MEDLINE=20519161; PubMed=1106071; MEDLINE=20519161, PubMed=1106071; MEDLINE=20	SEQUENCE FROM N.A. TISSUE-Fetal liver; MEDLINE-9620943; PubMed-8643514; Uren A.G., Pakusch M., Hawkins C.J., Puls K.L., Vaux D.L.; "Cloning and expression of apoptosis inhibitory protein homologs that function to inhibit apoptosis and/or bind tumor necrosis factor receptor associated factors."; Proc. Natl. Acad. Sci. U.S.A. 93:4974-4978(1996).	SEQUENCE FROM N.A. SEQUENCE FROM N.A. MEDLINE-96128127; PubMed-8548810; MEDLINE-96128127; PubMed-8548810; Rothe M., Pan MG., Henzel W.J., Ayres T.M., Goeddel D.V.; "The TNFR-TRAF signaling complex contains two novel proteins related to baculoviral inhibitor of apoptosis proteins."; Cell 83:1243-1252(1995). [2] SEQUENCE FROM N.A. TISSUE-Liver; MEDLINE-96149249; PubMed-8552191; Liston P., Roy N., Tamai K., Lefebvre C., Baird S., Cherton-Horvat G. Farahani R., McLean M., Ikeda J., Mackenzie A., Korneluk R.G.; "Suppression of apoptosis in mammalian cells by NAIP and a related family of IAP genes."; Nature 379:349-353(1996).	IAN Z2_HUMAN STANDARD; PRT; 489; Q16628; Q9UP46; Q9HC27; NOV-1997 (Rel. 35, Created) JUN-2002 (Rel. 41, Last sequence update) UNOV-191 [AP repeat-containing protein 1 (Inhibitor of apoptosis viein 1) (HIAP1) (HIAP-1) (C-IAP2) (TNFR2-TRAF signaling complex brein 1) (TAP homolog C). C2 OR API1 OR IAP1 OR MIHC. To sapiens (Human). TaxID-9606;

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CC -1- FUNCTION: APOPTOTIC SUPPRESSOR: THE BIR MOTIFS REGION INTERACTS
CC WITH TWE RECEPTOR ASSOCIATED FACTORS 1 AND 2 (TRAF1 AND TRAF2) TO
CC FORM AN HETEROMERIC COMPLEX, WHICH IS THEN RECRUITED TO THE TUMOR
CC NECROSIS FACTOR RECEPTOR 2 (TWFT2).

CC -1- SUBUNIT: Interacts with SMAC and with PRHSS25; these interactions
CC INCLIDENCAR LOCATION: Cytoplasmic (Potential).

CC -1- SUBCELLULAR LOCATION: Cytoplasmic (Potential).

CC -1- TISSUE SPECIFICITY: HIGHLY EXPRESSED IN FETAL LUNG, AND KIDNEY. IN
CC INCLUDING SPLEEN, THYMUS AND PERTHPHEAL HLOOD LYMPHOCYTES.

CC -1- DISEASE: Involved in a t(11;18)(q21;q21) chromosomal translocation
CC recurrent in low-grade MALT lymphoma (Mucosa-associated lymphoid
CC tissue). This translocation is found in approximately 50% of
CC CYLOGENETICALLY ADDORMAN 10w-grade MALT lymphoma and involves
CC HALT1 and BIRC2.

CC -1- SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINSER.

CC -1- SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINSER.

CC -1- SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINSER.
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PROSITE; PS50143; BIR_REPEAT_2;
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PROSITE; PS00518; ZE_RING_1; FAI
PROSITE; PS50089; ZF_RING_2; 1.
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Pfam; PF00653; BIR; 3.
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Genes Chromosomes Cancer 29:281-291(2000).
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L; U45878; AAC50371.1; -.
L; U37546; AAC505071.1; -.
L; AF070674; AAC83232.1; -.
L; AF178945; AAG09369.1; -.
P; Q13490; 1QBH.
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             Similarity
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IPR001315; CARD.
IPR001841; Znf_ring.
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                                                                                                                                                                  TISSUE-Fetal liver;
MEDLINE-96209843; PubMed-8643514;
Uren A.G., Pakusch M., Hawkins C.J., Puls K.L., Ve
"Cloning and expression of apoptosis inhibitory po-
function to inhibit apoptosis and/or bind tumor no
receptor-associated factors.";
Proc. Natl. Acad. Sci. U.S.A. 93:4974-4978(1996).
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MEDILINE-96128127; PubMed-8548810;

Rothe M., Pan M.-G., Henzel W.J., Ayres T.M., Goeddel D.V.;

"The TNFR2-TRAF signaling complex contains two novel proteins to baculoviral inhibitor of apoptosis proteins.";

Cell 83:1243-1252(1995).
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MEDLINE-99332054; Pubmed-10404221;
Hinds M.G., Norton R.S., Vaux D.L.,
"Solution structure of a baculovira
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- LEUKOCYTES.
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- SIMILARITY: CONTAINS 3
- SIMILARITY: CONTAINS 1
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baculoviral
   O THE IAP FAMILY.
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l inhibitor of apoptosis
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inhibitory protein homologs
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Q1-NOV-1997 (Rel. 35, Last sequence update)
Q1-NOV-1997 (Rel. 35, Last annotation update)
Q1-YUN-2002 (Rel. 41, Last annotation update)
Baculoviral TAP repeat-containing protein 3 (Inh
Protein 2) (MIAP-2).
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MIS MUSCUlus (MOUSE).
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EMBL; BC016174; AAH16174.1;
PDB; 1QBH; 20-OCT-99.
           SEQUENCE FROM N.A., AND PA
MEDLINE=96128127; PubMed=6
Rothe M., Pan M.-G., Henze
"The TNFR2-TRAF signaling
                                                                 Mammalia; Eutheria;
NCBI_TaxID=10090;
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Mammalia;
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                                                                                                                                                                                                                                          CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKRGDSP 55
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G., Henzel W.J., Ayres T.M., G
ignaling complex contains two
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Rodentia;
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InterPro; IPR001841; ZARC4; 1.
Pfam; PF00097; zf-C3HC4; 1.
Pfam; PF00619; CARD; 1.
Pfam; PF00653; BIR; 3.
SMART; SM00238; BIR; 3.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the Exthe European Bioinformatics Institute. There are no restruse by non-profit institutions as long as its content modified and this statement is not removed. Usage by and entitles requires a license agreement (See http://www.isb-sorsend an email to license@isb-sib.ch).
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Liston P., Lefebvre C., Fong W.G., Xuan J.Y., Korneluk R.G.;
"Genomic characterization of the mouse inhibitor of apoptosis
                                                                                                                                                DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
TISSUE=Skeletal mu
                                                                                                                                                                                                                  PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                MGD; MGI:1197009; Birc3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           and
$
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FORM AN HETEROMERIC COMPLEX, WHICH IS THEN RECRUITED TO THE NECROSIS FACTOR RECEPTOR 2 (TNFR2).

SUBUNIT: Interacts with SNAC and with PRSS25; these interact inhibit apoptotic suppressor activity (By similarity).

SUBCELLULAR LOCATION: Cytoplasmic (Potential).

TISSUE SPECIFICITY: EXPRESSED IN HEART, BRAIN, SPLEEN, LUNG, LIVER, SKELETAL MUSCLE, KINNEY, AND TESTIS.

SIMILARITY: BELONGS TO THE IAP FAMILY.

SIMILARITY: CONTAINS 3 BIR REPEATS.

SIMILARITY: CONTAINS 1 CARD DOMAIN.

SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
              1 CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKRGDSP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FUNCTION: APOPTOTIC SUPPRESSOR. THE BIR MOTIFS REGION INTERACTS WITH THE RECEPTOR ASSOCIATED FACTORS 1 AND 2 (TRAF1 AND TRAF2) TO FORM AN HETEROMERIC COMPLEX, WHICH IS THEN RECRUITED TO THE TUMOR
CELYRMSTYSAFPRGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKQGDSP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        83:1243-1252(1995).
                                                                                                                                                                                                                 E; PS01282; BIR_REPEAT_1; 3
E; PS50143; BIR_REPEAT_2; 3
E; PS50209; CARD; 1.
E; PS00518; ZF_RING_1; FALS
E; PS50089; ZF_RING_2; 1.
                                                  Similarity 94.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         genes.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              46:495-503(1997).
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177
262
447
565
380
                                                                                                                                                                                                                                                                                                                                                                                                                             10BH
                                                                                                                                                                                                                                                                                                                                                                                                                                          AAC42078.1; -. AAC53532.1; -.
                                                                                                         AA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                muscle;
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329
329
537
600
80
380
69676 MW;
                                                                 95.5%;
94.5%;
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                                                                                                                                                                                                       Repeat.
                                                                                                                     RING-TYPE.
E -> K (IN
                                                                                                                                               BIR 1.
BIR 2.
BIR 3.
CARD.
                                                                                                                                                                                                                                 FALSE_NEG.
                                                               Score 294;
Pred. No. 4.
                              Mismatches 7
                                                                                                        -> K (IN REF. 2).
E08969D93C6C610D
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                                                                              Length
                                                                                                          CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           these interactions
                                                    Indels
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                                                    RESULT 5
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R pfam; pr00697; zf-C3HC4; 1.

R pfam; pr00619; CARD; 1.

R SMART; SM00128; BIR; 3.

R SMART; SM00114; CARD; 1.

PROSITE; PS001282; BIR_REPEAT_1; 3.

PROSITE; PS001282; BIR_REPEAT_2; 3.

PROSITE; PS50143; BIR_REPEAT_2; 3.

PROSITE; PS50163; ZF_RINC_1; FALSE, PROSITE; PS500519; ZF_RINC_2: 1

Appoptosis: "1--"
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Best Local S
Matches 50
                                                                                                                                                                                                                                                                                                                                        DOMAIN
ZN_FING
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BIR_CHICK
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REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  InterPro; IPR001370; BIR. InterPro; IPR001315; CARD. InterPro; IPR001841; Znf_I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HSSP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDIINE=98110590; PubMed=9441758;
Liston P., Lefebvre C., Fong W.G., Xuan J.Y., Korneluk R.G.;
"Genomic characterization of the mouse inhibitor of apoptosis protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Apoptosis;
REPEAT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15-JUN-2002 (Rel. a Baculoviral IAP reprotein 1) (MIAP1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=10090
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                                                                                                                                26
                                                                                                                                                                               1 CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKRGDSP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FUNCTION: APOPPOTIC SUPPRESSOR. THE BIR MOTIFS REGION INTERACTS
WITH THE RECEPTOR ASSOCIATED FACTORS 1 AND 2 (TRAF1 AND TRAF2) TO
FORM AN HETEROMERIC COMPLEX, WHICH IS THEN RECRUITED TO THE TUMOR
NECROSIS FACTOR RECEPTOR 2 (TWET2) (BY SIMILARITY).
SUBUNIT: Interacts with SMAC and with PRSS25; these interactions
Inhibit apoptotic suppressor activity (By similarity).
SUBCELLULAR LOCATION: Cytoplasmic (Potential).
SUBCELLULAR LOCATION: Cytoplasmic (Potential).
SIMILARITY: BELONGS TO THE IAP FAMILY.
SIMILARITY: CONTAINS 3 BIR REPEATS.
SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINJER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ", U88908; AAC53531.1;
", Q13490; 1QBH.
"MGI:1197007; Birc2.
                                                                                                                              2 genes "
                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      46:495-503(1997)
                                                                                                                                                                                                                                                                                                                                                                      167
253
436
553
                                                                                                                                                                                                                                      Conservative
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IAP repeat-containing protein 2 (Inhibitor of apoptosis
                                                                                                                                                                                                                                                                                                                                           AA;
  STANDARD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8; ZF_RING_1; FALSE_NEG.
9; ZF_RING_2; 1.
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                                                                                                                                                                                                                                   Score 287; DB
Pred. No. 3.8e
2; Mismatches
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BIR 2.
BIR 3.
CARD.
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  PRT;
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                                                                                                                                                                                                                                                                                                                                           AD7F73E6849317D1 CRC64;
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  611
                                                                                                                                                                                                                                                                                 DB 1;
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                                                                                                                                                                                                                                                                                    Length 600
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                                                                                                            Query Match
Best Local
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SMART; SM00114; CARD; 1.
SMART; SM00114; RING; 1.
SMART; SM00184; RING; 1.
SMART; SM00184; BIR_REPEAT_1; 3
PROSITE; PS50143; BIR_REPEAT_2; 3
PROSITE; PS50209; CARD; 1.
PROSITE; PS50209; ZF_RING_1; FALS;
PROSITE; PS50089; ZF_RING_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               InterPro; IPR001370; BIR.
InterPro; IPR001315; CARD;
InterPro; IPR001841; Znf_ring.
InterPro; IPR001841; Znf_ring.
Pfam; PF00097; zf-C3HC4; 1.
Pfam; PF00619; CARD; 1.
Pfam; PF00653; BIR; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q90660;
01-NOV-1997 (Rel. 35, Cr
01-NOV-1997 (Rel. 35, La
16-OCT-2001 (Rel. 40, La
Inhibitor of apoptosis p
                                                                                                                                                                              DOMAIN
ZN_FING
SEQUENCE
                                                                                                                                                                                                                                                                   Apoptosis;
REPEAT
REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              between the Swiss Institute of Bioinformatics and the EMBI outstation -
the European Bioinformatics Institute. There are no restrictions on its
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or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TISSUE-Spleen;
TISSUE-97101112; PubMed-8945639;
MEDLINE-97101112; PubMed-8945639;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein).
ITA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL; U27466; AAB48118.1; -. HSSP; Q13490; 1QBH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gallus gallus (Chicken).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                     REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This SWISS-PROT entry is copyright. It is produced through a collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Digby M.R., Kimpton W.G., York J.J., "ITA, a vertebrate homologue of IAP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=9031;
29
CELYRMSTFSTFPVNVPVSERRLARAGFYYTGVQDKVKCFSCGLVLDNWQPGDN
                                            CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKRGDS
                                                                                                            Similarity
                                                                                                                                                                            30
176
262
446
564
                                                                                                                                                                                                                                                                                                                    Zinc-finger;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (Rel. 35, Created)
(Rel. 35, Last sequence update)
(Rel. 40, Last annotation update)
f apoptosis protein (IAP) (Inhibitor
                                                                                    Conservative
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329
329
536
C
599
69009 MW;
                                                                                                            80.5%;
                                                                                                                                                                                                                                                                                                                  Repeat; Nuclear
                                                                                                                                                                                                                                           BIR 1.
BIR 2.
BIR 3.
                                                                                                                                                                              RING-TYPE.
; 53FC9136F34EBDDD CRC64;
                                                                                                          Score 248;
Pred. No. 5.
                                                                                                                                                                                                                                                                                                                                                             FALSE_NEG
                                                                                         Mismatches
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                                                                                                                                                                                                                                                                                                                  protein
                                                                                                            DB 1;
.3e-25;
                                                                                       6
                                                                                                                                 Length
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  82
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BIR4 HUMAN STANDAKU;
P98170; Q9NQ14;
01-OCT-1996 (Rel. 34, Created)
01-OCT-1996 (Rel. 34, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Baculoviral IAP repeat-containing protein 4 (
protein 3) (X-linked inhibitor of apoptosis p
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE-96149249; PubMed-8552191;
MEDLINE-96149249; PubMed-8552191;
Liston P., Roy N., Tamai K., Lefebvre C., Baird
Farahani R., McLean M., Ikeda J., Mackenzie A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Duckett C.S., Nava V.E., Gedrich R.W., Clem R.J., v Gilfillan M.C., Shiels H., Hardwick J.M., Thompson "A conserved family of cellular genes related to the gene and encoding apoptosis inhibitors."; EMBO J. 15:2685-2694(1996).
                                                                                                                                                                                                                                                                                                                                                              Nature
[5]
            +++
                                                                                                                                                                                        Liu Z., Sun C., Olejniczak E.T., Meadows
Herrmann J., Wu J.C., Fesik S.W.;
"Structural basis for binding of Smac/DI
                                                                                                                                                                                                                           STRUCTURE BY NMR OF 241-356 IN COMPLEX WITH MEDLINE-21020961; PubMed-11140637;
                                                                                                                                                                                                                                                              "HtrA2 promotes cell death through its ability to antagonize inhibitor J. Biol. Chem. 277:445-454(2002).
                                                                                                                                                                                                                                                                                                Verhagen A.M., Silke J.,
Connolly L.M., Day C.L.,
Simpson R.J., Vaux D.L.,
                                                                                                                                                                                                                                                                                                                                    MUTAGENESIS OF ASP-148; ASP-214; ASN-259; MEDLINE-21634829; PubMed-11604410;
                                                                                                                                                                                                                                                                                                                                                                                   "X-linked IAP is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "Suppression of apoptosis in family of IAP genes.";
Nature 379:349-353(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (IAP-like protein) (HI
BIRC4 OR API3 OR IAP3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HUMAN
                                                                                                                                                                   Nature 408:1004-1008(2000).
                                                                                                                                                                                 domain
                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE-97373959;
                                                                                                                                                                                                                                                                                                                                                                                                                         FUNCTION
                                                                                                                                                                                                                                                                                                                                                                                                                                              Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE-96256286; PubMed-8654366;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens (Human)
         and -7, while
The interact:
and third BII
SIMILARITY:
SIMILARITY:
SIMILARITY:
                                                                                                      FUNCTION: Apoptotic suppressor. Inhibitor of SUBURIT: Interacts with SMAC and with PRSS25; inhibit apoptotic suppressor activity.
SUBCELLULAR LOCATION: Cytoplasmic.
TISSUE SPECIFICITY: UBIQUITOUS, EXCEPT PERIPH
                                           DOMAIN: The second BIR domain and -7, while the third BIR is The interactions with SMAC and and third BIR domains.
                                                                                              LEUKOCYTES.
                                                                                                                                                                                                                                                                                                                                                                         388:300-304(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                            o
                                                                                                                                                                                                                                                                                                                                                                                                                                             (APR-2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  heart;
                                                                                                                                                                                                                                                                                                                                                                                                Takahashi
           BELONGS TO THE IAP FAMILY.
CONTAINS 3 BIR REPEATS.
CONTAINS 1 RING-TYPE ZINC FINGER
                                                                                                                                                                                                                                                                                                                                                                                 ; PubMed=9230442;
akahashi R., Salvesen G
a direct inhibitor of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Chordata;
Primates;
                                                                                                                                                                                                                                                                                                            F :
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                                                                                                                                                                                                                                                                                                                                                                                                                                             the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          XIAP.
                                                                                                                                                                                                                                                                                                           Ekert P.G., Pakusch
Tikoo A., Burke R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Craniata; Ve
Catarrhini;
                                                         R is
                                                                                                                                                                                         Smac/DIABLO
                                                        is sufficient to inhibit caspase-3 s involved in caspase-9 inhibition d PRSS25 are mediated by the second
                                                                                                                                                                                                                                                                         its
r of
                                                                                                                                                                                                                                                                                                                                                                                               G
                                                                                                                                                                                                                                                                                                                                                                                  G.S., Reed J
[ cell-death
                                                                                                                                                                                                                                                                         serine pro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Vertebrata;
                                                                                                                                                                                                               R.P., Betz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hominidae;
                                                                                                                                                                                                                                                                                                                                                  TRP-310
                                                                                                        PERIPHERAL
                                                                                                                                                                                                                                        SMAC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           R.J., van Dongen
hompson C.B.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (Inhibitor
                                                                                                                                                                                         ξ
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                                                                                                                                                                                                                                                                                      protease
                                                                                                                                                                                                                                                                                                                                                                                                                                             databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S., Cherton-Horvat
Korneluk R.G.;
NAIP and a related
                                                                                                                                                                                         the
                                                                                                                                          caspase-3, these int
                                                                                                                                                                                                                                                                                                                                                                                               J.C.
                                                                                                                                                                                                                                                                                                                         Kaufmann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   the baculovirus
                                                                                                                                                                                                                                                                         proteins
                                                                                                                                                                                                                                                                                                                                                  AND
                                                                                                                                                                                                                                                                                                                                                                                  proteases.";
                                                                                                                                                                                                                                                                                                              <u>ر</u>
                                                                                                                                                                                         XIAP
                                                                                                                                                                                                                S.F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 or of apoptosis
(X-linked IAP)
                                                                                                                                                                                                                                                                                                                                                GLU-314.
                                                                                                        BLOOD
                                                                                                                                                                                                                                                                                      activity
                                                                                                                                           interactions
                                                                                                                                                                                                                                                                                                               Moritz
                                                                                                                                                                                        BIR3
                                                                                                                                                                                                                                                                                                                        Η.
                                                                                                                                                                                                                Oost T.,
                                                                                                                                                        -7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        J.L.,
                                                                                                                                                     and
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BIR4_MOUSE
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                                                                                                                                                                                                                                                                                                                                                                                                    RESULT
                                                                                                                                                       Q60989; 008865;

Ol-NOV-1997 (Rel. 35, Last sequence update)

r 01-NOV-1997 (Rel. 35, Last sequence update)

r 15-JUN-2002 (Rel. 41, Last annotation update)

Baculoviral IAP repeat-containing protein 4 (In)

protein 3) (X-linked inhibitor of apoptosis professional (IAP)

E (IAP homolog A) (MIAP3) (MIAP-3).

E (IAP homolog A) (MIAP3) (MIAP-3).

RTRC4 OR API3 OR XIAP OR AIPA OR MIHA.
                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SMART; SM00238; BIR; 3.

SMART; SM00184; RING; 1.

SMORT; SM00184; RING; 1.

PROSITE; PS01282; BIR_REPEAT_1; 3

PROSITE; PS00143; BIR_REPEAT_2; 3

PROSITE; PS00518; ZF_RING_1; FALS;

PROSITE; PS50089; ZF_RING_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                   CONFLICT
CONFLICT
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                            ZN_FING
MUTAGEN
MUTAGEN
                             STRAIN-C57BL/6 X CBA, TISSUE-Liver; MEDILINE-96209843; PubMed-8643514; Uren A.G., Pakusch M., Hawkins C.J., "Cloning and expression of apoptosis function to inhibit apoptosis and/or receptor-associated factors."; Proc. Natl. Acad. Sci. U.S.A. 93:4974
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  use by non-profit institutions as long as its content is modified and this statement is not removed. Usage by and fo entities requires a license agreement (See http://www.isb-slb.or send an email to license@isb-slb.ch).
                                                                                                                           Eukaryota; Metazoa;
Mammalia; Eutheria;
NCBI_TaxID=10090;
                                                                                                                                                                                                                                                            BIR4_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL; U32974; A: EMBL; AL121601;
          SEQUENCE
                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Apoptosis; 23
3D-structure.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pfam; PF00097; zf-C3HC4; Pfam; PF00653; BIR; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   InterPro; IPR001370; InterPro; IPR001841;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Genew;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PDB; 1G3F;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL;
                                                                                                                                                                                                                                                                                                                 26
                                                                                                                                                                                                                                                                                                                                     N
                                                                                                                                                                                                                                                                                                                EFNRIKTFANFPSGSPVSASTLARAGFLYTGEGDTVRCFSCHAAVDRWQYGDS
                                                                                                                                                                                                                                                                                                                                     ELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKRGDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          300079
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               U45880;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HGNC:592; BIRC4.
                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                 162
423
497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10-JAN-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Zinc-finger;
                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                            163
265
450
214
314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAC50373.1; -.
AAC50518.1; -.
D1; CAB95312.1; -
 Lefebyre
          z
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                                                                                                                                                                                                                                                            STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                   162
423
56684
                                                                                                                                       Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                            93
230
330
485
214
314
                                                                                                                                                                                                                                                                                                                                                                    51.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BIR.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Repeat;
                                                                                                                                                                                                                                                                                                                                                                                                    Œ,
 Korneluk
                                                                                                                                                                                                                                                                                                                                                                                                          BIR 1.
BIR 2.
BIR 3.
BIR 3.
RING-TYPE.
D->S: REDUCED INT
E->S: DECREASED J
WITH PRSS25.
S -> C (IN REF. 1)
O -> P (IN REF. 1)
                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                    Score 158;
Pred. No. 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FALSE_NEG.
                                                                                                                                       Craniata; Ver
Sciurognathi;
                               93:4974-4978(1996).
                                                                                                                                                                                                                                                            PRT;
                                                                                                                                                                                                                                                                                                                                                                                                   VITH PRSS25.

3 -> C (IN REF. 1).

3 -> P (IN REF. 2).

9D394C16D45EB635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Thiol protease inhibitor;
                                                                                                                                                                                                                                                                                                                                                           Mismatches
 Ħ
                                                  Puls K.L.,
inhibitory
bind tumor
                                                                                                                                                                                                                                                             496
                                                                                                                                                  Vertebrata;
                                                                                                                                                                                                                                                                                                                                                                                DΒ
 Mackenzie
                                                                                                                                                                                                                                                            ₽
                                                                                                                                                                                                                                                                                                                                                                     2e-13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        INTERACTION
                                                                                                                                                                                                                                                                                                                                                                                1.
                                                                                                                                         Muridae;
                                                                                                                                                                                            protein)
                                                                                                                                                                                                        (Inhibitor
                                                                                                                                                                                                                                                                                                                                                                                                                                              INTERACTION
                                                     protein h
                                                                          Vaux D.L.;
                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                    CRC64;
                                                                                                                                                                                                                                                                                                                                                           Indels
A.E.;
                                                                                                                                                    Euteleostomi;
                                                                                                                                         Murinae;
                                                                                                                                                                                            or of apoptosis (X-linked IAP)
                                                                                                                                                                                                                                                                                                                                                                                497;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           WITH PRSS25
                                                     homologs
s factor
                                                                                                                                                                                                                                                                                                                                                                                                                                               HTIW
                                                                                                                                                                                                                                                                                                                  78
                                                                                                                                                                                                                                                                                                                                     54
                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                         Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                               SMAC
                                                                                                                                                                                                                                                                                                                                                           Gaps
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RESULT 8
BIR4_RAT
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                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; U36842;
EMBL; U88990;
HSSP; Q13490;
                                                                                                                                                                                                                                                                                                                                                                                                                                CONFLICT
CONFLICT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ZN_FING
CONFLICT
CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PROSITE; Pa
Apoptosis;
REPEAT
                                    09R016;
16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Baculoviral IAP repeat-containing protein 4 ()
protein 3) (X-linked inhibitor of apoptosis p
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EN the European Bioinformatics Institute. There are no restruse by non-profit institutions as long as its content modified and this statement is not removed. Usage by and entities requires a license agreement (See http://www.isb-sor send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <del>+</del> +
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Submitted -!- FUNCT1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PROSITE; PS01282; BIR_REPEAT_1;
PROSITE; PS00143; BIR_REPEAT_2;
PROSITE; PS00518; ZF_RING_1; FAI
PROSITE; PS50089; ZF_RING_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SMART; SM00238; BIR; 3.
SMART; SM00184; RING; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MGD; MGI:107572; Birc4.
InterPro; IPR001370; BIR.
InterPro; IPR001841; Znf_ring.
Pfam; PF00097; zf-C3HC4; 1.
Pfam; PF00653; BIR; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <del>:</del>
                                                                                                                                                          BIR4_RAT
                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REPEAT
                                                                                                                                                                                                                                                         26
                                                                                                                                                                                                                                                                                             N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (By similarity).

(By similarity).

SUBCUTT: Interacts with SNAC and with PRSS25; these interactions inhibit apoptotic suppressor activity (By similarity).

SUBCELLULAR LOCATION: Cytoplasmic (By similarity).

DOMAIN: The second BIR domain is sufficient to inhibit caspase-3 and -7, while the third BIR is involved in caspase-9 inhibition. The interactions with SNAC and PRSS25 are mediated by the second and third BIR domains (By similarity).

SIMILARITY: BELONGS TO THE IAP FAMILY.

SIMILARITY: CONTAINS 3 BIR REPEATS.

SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mitted (JUN-1997) to the EMBL/Ger
FUNCTION: Apoptotic suppressor.
      homolog /
                                                                                                                                                                                                                                                                         ELYRMSTYSTFPAGYPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKRGDS
                                                                                                                                                                                                                                                     EFUNTAMEPSSSPVSASTLANAGFLYTGEGDTVQCFSCHAAIDNWQYGDS
                                                                                                                                                                                                                                                                                                                                 . Similarity
27; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; Zinc-finger;
93
163 230
264 329
448 208 208
208 208
317 317
317 327
326 346
346 346
346 346
346 346
346 449
462 462
                                                                                                                                                                                                                                                                                                                                                                                                              496
TA)
                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAC52594.1; -.
AAB58376.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1QBH
                                                                                                                                                                                                                                                                                                                                                                                                            AΑ;
                                                                                                                                                          STANDARD;
        (RIAP3) (RIAP-3).
R XIAP.
                                                                                                                                                                                                                                                                                                                                                   49.48; 50.98;
                                                                                                                                                                                                                                                                                                                                                                                                            56079
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Repeat
                                                                                                                                                                                                                                                                                                                                                                                                              ¥.
                                                                                                                                                                                                                                                                                                                                 8
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pressor. Inhibitor of caspase-3,
                                                                                                                                                                                                                                                                                                                                                                                                                            BBIR 2.

BING 3.

RING TYPE.

E -> C (IN

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                                            promein)
                                            (Inhibitor of apoptosis procein) (X-linked IAP)
                                                                                                                                                                                                                                                                                                                                 18;
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RESULT 9
PIAP_PIG
   RR OCC OCC DT DT AC
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Best Local
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InterPro; IPRO01370; BIR.
InterPro; IPRO01841; Znf_ring.
InterPro; IPRO01841; Znf_ring.
Pfam; PF00097; zf-C3HC4; 1.
Pfam; PF00053; BIR; 3.
SMART; SM00238; BIR; 3.
SMART; SM00184; RING; 1.
                                                                                                                                                                                                                              PIAP_PIG
062640;
15-DEC-1998
15-DEC-1998
16-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REPEAT
ZN_FING
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 entitles requires a license agreement (S or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Inhibit apoptotic suppressor activity (By similarity).

SUBCELLULAR LOCATION: Cytoplasmic (By similarity).

DOMAIN: The second BIR domain is sufficient to inhibit cass and -7, while the third BIR is involved in caspase-9 inhib the interactions with SMAC and PRSS25 are mediated by the and third BIR domains (By similarity).

SIMILARITY: BELONGS TO THE IAP FAMILY.

SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
                                                                             Sus scrofa (Pig).
Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                               PIAP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               the European Bioinformatics Institute. The use by non-profit institutions as long modified and this statement is not removed.
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Eukaryota; Metazoa;
Mammalia; Eutheria;
SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; AB033366; BAA85304.1; -. HSSP; Q13490; 1QBH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the Electron to the Swiss Institute of Bioinformatics and the Electron to the Swiss Institute of Bioinformatics and the Electron to the Swiss Institute of Bioinformatics and the Electron to the Swiss Institute of Bioinformatics and the Electron to the Swiss Institute of Bioinformatics and the Electron to the Swiss Institute of Bioinformatics and the Electron to the Swiss Institute of Bioinformatics and the Electron to the Swiss Institute of Bioinformatics and the Electron to the Swiss Institute of Bioinformatics and the Electron to the Swiss Institute of Bioinformatics and the Electron to the Swiss Institute of Bioinformatics and the Electron to the Swiss Institute of Bioinformatics and the Electron to the Swiss Institute of Bioinformatics and the Electron to the Swiss Institute of Bioinformatics and the Electron to the Swiss Institute of Bioinformatics and the Electron to the Swiss Institute of Bioinformatics and the Electron to the Swiss Institute of Bioinformatics and the Electron to the Swiss Institute of Bioinformatics and the Electron to the Swiss Institute of Bioinformatics and the Electron to the Swiss Institute of Bioinformatics and the Electron to the Swiss Institute of Bioinformatics and the Electron to the Swiss Institute of Bioinformatics and the Electron to the Swiss Institute of Bioinformatics and the Electron to the Swiss Institute of Bioinformatics and the Bioinformatics and the Bioinformatics and the Bioinformatics and the Bioinformatics and the Bioinformatics and the Bioinformatics and the Bioinformatics and the Bioinformatics and the Bioinformatics and the Bioinformatics and the Bioinformatics and the Bioinformatics and the Bioinformatics and the Bioinformatics and the Bioinformatics and the Bioinformatics and the Bioinformatics and the Bioinformatics and the Bioinformatics and the Bioinformatics and the Bioinformatics and the Bioinformatics and the Bioinformatics and the Bioinformati
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-i- FUNCTION: Apoptotic suppressor. Inhibitor of caspase-3,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=10116; [1]
                                                    NCBI_TaxID=9823;
                                                                                                                                                                                                        Putative inhibitor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Apoptosis;
REPEAT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 ELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKRGDS | |: |: ||: || :| ||: || ||: || ||: ||| ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2
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27; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PS01282; BIR_REPEAT_1;
PS50143; BIR_REPEAT_2;
PS00518; ZF_RING_1; FAI
PS50089; ZF_RING_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  26
163
264
449
496
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26 93
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(Rel. 37, Last sequence update)
(Rel. 40, Last annotation updat
hibitor of apoptosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
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                                                                                                                                                                                                                                                                                                                                                   STANDARD;
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Da; Chordata;
ia; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  230 B
329 B
484 R
56072 MW;
                                                                                   Chordata; Craniata; Vertebrata; Cetartiodactyla; Suina; Suidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  49.0%;
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FREPEAT.

BIR 1.

BIR 2.

BIR 3.

RING-TYPE.

E250E2
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                                                                                                                                                                                                                                                                                                                                                   PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        E250E3C77461A469 CRC64;
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                                                                                                                                                                                                                                                                                                                                                   358
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          There are no rest
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 496;
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                                                                                      Euteleostomi;
Sus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               restrictions
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BIRG
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Matches
                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
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InterPro; IPR001370; BIR.
InterPro; IPR001315; CARD.
InterPro; IPR001315; CARD.
InterPro; IPR001841; Znf_ring.
Pfam; PF00679; zf-C3HC4; 1.
Pfam; PF00619; CARD; 1.
Pfam; PF00653; BIR; 2.
SMART; SM00134; CARD; 1.
SMART; SM00114; CARD; 1.
SMART; SM00114; CARD; 1.
SMART; SM00184; RING; 1.
PROSITE; PS01282; BIR_REPEAT_1; 2
PROSITE; PS01282; BIR_REPEAT_2; 2
                                                                                                                                                                                                                                                                                                                                                                                                                         DOMAIN
ZN_FING
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PROSITE;
PROSITE;
PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Stehlik C., de Martin R., Binder B.R., Lipp J.;

Cytokine induced expression of porcine inhibitor of apoptosis protein (iap) family member is regulated by HF-kappa B.";

Biochem. Biophys. Res. Commun. 243:827-832(1998).

I. SIMILARITY: BELONGS TO THE IAP FAMILY.

SIMILARITY: CONTAINS 2 BIR REPEATS.

I. SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
                       Endrizzi M.G., Hadinoto V., Growney J.D., 
*Genomic sequence analysis of the mouse N
Genome Res. 10:1095-1102(2000).
                                                                                                                                                                                                                  Q9JIB3;
16-OCT-2001 (Rel.
                                                                                                                                                                                                                                                                 MOUSE
                                                                                                                                                       inhibitory protein BIRC1G OR NAIP7.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                the European Bioinformatics Institute. There are no rest use by non-profit institutions as long as its content modified and this statement is not removed. Usage by an
                                                              SEQUENCE FROM N.A. MEDLINE-20414747; PubMed-10958627;
                                                                                                              Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                   16-0CT-2001 (Rel. 40, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation updat
Baculoviral IAP repeat-containing protein 1
inhibitory protein 7).
                                                                                                                                                                                                                                                   BIRG_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           entities requires a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This
                                                                                                     NCBI_TaxID=10090;
                                                                                                                                           Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Apoptosis;
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                                                                                                                                                                                                                                                                                                                    93
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           FUNCTION:
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PS50209;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PS50209; CARD; 1.
PS00518; ZF_RING_1;
PS50089; ZF_RING_2;
                                                                                                                                                                                                                                                                                                                                                                                                                         358 AA;
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193
311
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      PREVENTS MOTOR-NEURON APOPTOSIS INDUCED BY A VARIETY OF
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BIR 2.
CARD.
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Pred. No. '
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                                                                                                                Craniata; Vertebrata; Sciurognathi; Muridae;
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protein 1g
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                                                 Miller W., Dietrich W.F.;
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                                   gene array.
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Best Local S
Matches 25
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DOMAIN
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REPEAT
REPEAT
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                                                                                                                                                                          MEDLINE-99417674; PubMed-10486205; Endrizzi M., Huang S., Scharf J.M., Ke Kunkel L.M., Miller W., Dietrich W.F.; "Comparative sequence analysis of the interval.";
                                                                                                                                                                                                                                                                                                                                                       MEDLINE-99431676; PubMed-10501978; Huang S., Scharf J.M., Growney J.D., Endriz "The mouse Naip gene cluster on Chromosome functional transcripts."; Mamm. Genome 10:1032-1035(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         inhibitory protein 5).
BIRCIE OR NAIP5 OR NAIP-RS3.
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                  Scharf J.M., Damron D., Fri
Kunkel L.M., Dietrich W.F.;
                                          MEDLINE-97131520; PubMed-8975718;
Scharf J.M., Damron D., Frisella
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
NCBI_TaxID=10090;
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HSSP; Q13490; 1QBH.
MGD; MGI:1858256; Birclg
                                                                                        STRAIN-129/SvJ;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus (Mouse).
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                                                                                                                SEQUENCE
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25; Conserv
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PS50143; BIR_REPEAT_2;
PS50837; NACHT; 1.
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                                                                                                                                                       60:137-151(1999).
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127
BIR 1.
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BIR 2.
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1 NACHT DOMAIN
for human
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mosome 13
spinal muscular
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encodes several distinct
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                                                                            inhibitory protein 6).
BIRCIF OR NAIP6 OR NAIP-RS4.
Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
NCBI_TaxID=10090;
                                                                                                                                                                               BIRE_MOUSE STANDAND, CO09121;

Q9JIB6; P81704; O09122; O09121;

16-OCT-2001 (Rel. 40, Created)

16-OCT-2001 (Rel. 40, Last sequence update)

15-JUN-2002 (Rel. 41, Last annotation update)

Baculoviral IAP repeat-containing protein 1
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Interpro; IPR001370; BIR.
Pfam; PF00653; BIR; 3:
SMART; SM00238; BIR; 3:
PROSITE; PS01282; BIR_REPEAT_1; 2:
PROSITE; PS50143; BIR_REPEAT_2; 3:
PROSITE; PS50837; NACHT; 1.
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  SEQUENCE FROM N.A. MEDLINE=20414747;
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-!- FUNCTION: PREVENTS MOTOR-NEURON SIGNALS.
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REPEAT
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SEQUENCE FROM N.A.
MEDLINE-94187094; PubMed-8139034;
Birnbaum M.J., Clem R.J., Miller L.K.;
"An apoptosis-inhibiting gene from a nuclear encoding a polypeptide with Cys/His sequence J. Virol. 68:2521-2528(1994).
                                                                                                                                                                                                                      IAP3_NPVOP
P41437;
O1-NOV-1995
O1-NOV-1995
16-OCT-2001
                                                                                                                                                                                01-NOV-1995 (Rel. 32, Created)
01-NOV-1995 (Rel. 32, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Apoptosis inhibitor 3 (IAP-3).
IAP3 OR IAP.
                                                                                                                                          Orgyla pseudotsugata mu
Viruses; dsDNA viruses,
Nucleopolyhedrovirus.
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Kunkel L.M., Dietrich W.F.;
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InterPro; IPR001370; BIR,
Pfam; PF00653; BIR; 3,
SMART; SM00238; BIR; 3.
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Apoptosis 1
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Q24306;
Q1-NOV-1997
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SMART;
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PROSITE; PS0143; BIR_REPEAT_2;
PROSITE; PS00518; ZF_RING_1; FAI
PROSITE; PS50089; ZF_RING_2; FAI
Apoptosis; Zinc-finger; Repeat.
REPEAT 18 84 BII
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EMBL;
HSSP;
Hay B.A., Wassarman D.A., Rubin G.M.
"Drosophila homologs of baculovirus
function to block cell death.";
Cell 83:1253-1262(1995).
-1- FUNCTION: APOPTOTIC SUPPRESSOR.
HID-DEPENDENT CELL DEATH IN THE
                                                                                                                                                                                                                                    Drosophila melanogaster (Fruit fly).
Eukaryota; Metazoa; Arthropoda; Mandibulata;
Insecta; Pterygota; Neoptera; Endopterygota;
Muscomorpha; Ephydroidea; Drosophilidae; Dros
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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Virology 229:381-399(1997).
-1- FUNCTION: ACTS BY BLOCKING CELLULAR APOPTOSIS.
PREVENTING VIRAL STIMULATION OF APOPTOSIS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "The sequence of the Orgyia p
                                                                                                                        TISSUE-Eye imaginal disk;
MEDLINE-96128128; PubMed-8548811;
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SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
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EAARLRTFAEWPRGLKQRPEELAEAGFFYTGQGDKTRCFCCOGGLKDWEPDDAP 164
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TISSUE-Fetal brain;
MEDLINE-95112344; PubMed-7813013;
MEDLINE-95112344; PubMed-7813013;
Roy N., Mahadevan M.S., McLean M., Shutler G., Yaraghi Z.,
Roy N., Baird S., Besner-Johnston A., Lefebvre C., Kang X.,
Farahini R., Baird S., Besner-Johnston A., Lefebvre C., Kang X.,
Salih M., Abbry H., Tanai K., Guan X., Ioannou P., Crawford T.O.,
de Jong P.J., Surh L., Ikeda J., Korneluk R.G., Mackenzie A.;
"The gene for neuronal apoptosis inhibitory protein is partially
deleted in individuals with spinal muscular atrophy.";
Cell 80:167-178(1995).
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ZN_FING
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                   Chen Q., Baird S. Xuan J.-Y., Kang MacKenzie A.E.;
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16-OCT-2001 (Rel. 40, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Baculoviral IAP repeat-containing protein 1 (
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                                                              MEDLINE=98163755;
Chen Q., Baird S.
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TISSUE-Brain;
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Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
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PROSITE; PS01282; BIR_REPEAT_1;
PROSITE; PS50143; BIR_REPEAT_2;
PROSITE; PS00518; ZF_RING_1; FAI
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Pred. No. 1.9e-09
8; Mismatches 2
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Catarrhini; Hominidae
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SMART; SM00238; BIR; 3.
PROSITE; PS01282; BIR_REPEAT_1;
PROSITE; PS50143; BIR_REPEAT_2;
PROSITE; PS50837; NACHT; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; U21913; AAA64504.1;
EMBL; AC005031; AAC62261.
HSSP; 013490; 1QBH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SIGNALS:
-!- TISSUE SPECIFICITY: EXPRESSED IN MOTOR NEURONS, BUT NOT IN SENSORY NEURONS. FOUND IN LIVER AND PLACENTA, AND IN A LESSER EXTENT IN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=96149249; PubMed=8552191;
Liston P., Roy N., Tamai K., Lefebvre C., Baird S., Cherton-Horvat
Farahani R., McLean M., Ikeda J., Mackenzie A., Korneluk R.G.;
"Suppression of apoptosis in mammalian cells by NAIP and a related
family of IAP genes.";
Nature 379:349-353(1996).
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Anzevino R., Velona I., Brahe C., Scheffer H., van Ommen G.J.B.,
Buys C.H.C.M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; U19251; AAC52045.1; EMBL; U80017; AAC52047.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        entities requires a license agreement (S or send an email to license@isb-sib.ch).
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Submitted (JUN-1998) to the EMBL/GenBank/DDB/ databases
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Genew;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         use by non-profit institutions as long modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NEWBORNS.
-1- SIMILARITY: CONTAINS 3 BIR REPEATS.
-1- SIMILARITY: CONTAINS 1 NACHT DOMAIN.
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REPEAT
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SPINAL CORD.

DISEASE: MUTATED OR DELETED FORMS OF NAIP HAVE BEEN FOUND IN INDIVIDUALS WITH SPINAL MUSCULAR ATROPHY TYPE I (SMA TYPE 1). SMAS ARE FATAL AUTOSOMAL RECESSIVE DISORDERS SUBCLASSIFIED AS TYPE I (WERDING-HOFFMANN DISEASE), TYPE II (INTERMEDIATE FORM), AND TYPE III (WOHLFART-KUGELBERG-WELANDER DISEASE) BASED UPON THE AGE OF ONSET AND CLINICAL SEVERITY. THESE NEURODISGENERATIVE DISORDERS ARE CHARACTERIZED BY DEGENERATION OF LOWER MOTOR NEURONS, LEADING TO PROGRESSIVE PARALYSIS MUSCULAR ATROPHY. CONCERNS 1 IN 6000
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BIR 2.
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BIR 3.
NACHT
PK -> YR (IN REF. 4).
PV -> ST (IN REF. 3).
M -> V (IN REF. 3).
Y -> H (IN REF. 3).
Y -> GREF. 4).
MISSING (IN REF. 4).
Score 128; DB 1; Pred. No. 8.3e-09;
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Search completed: May 5, 2003, 16:02:44
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32.3	33.1	33.8	34.4	34.4	34.7		35.2			35.7	36.4	36.4	37.0		37.3	37.7	39.6	40.3	40.3	40.3	40.9	41.2	41.6	41.9	42.9	44.5	45.1	45.5
268	150	109	498	261	236	106	276	377	236	379	236	236	313	153	402	346	403	298	298	280	208	243	1160	438	224	597	517	276
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Q9ifi8 helicoverpa	Q9yvj4 melanoplus	O8wmy4 bos taurus	6960u3 drosophila	Q9qes9 epiphyas po	Q95m71 gorilla gor	. C96rw6 homo sapien	089744 buzura supp				Q96p09 homo sapien	Q96rw5 homo sapien	Q9j827 spodoptera	Q9vem2 drosophila		Q968t8 bombyx mori	Q8wrd9 ochlerotatu	Q96ca5 homo sapien	homo	Q9hap7 homo sapien	chilo	Q91ew1 cydia pomon		Q9vux5 drosophila	O88642 rattus norv	Q9r015 mus musculu	Q8r4u8 rattus norv	Q8q195 mamestra co

ALIGNMENTS

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HSSP; Q13409; 10BH.
InterPro; IPR001370; BIR.
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InterPro; IPR001315; CARD.
InterPro; IPR001841; 2nf_ring.
Pfam; PF00653; BIR; 3.
Pfam; PF00619; CARD; 1.
Pfam; PF00619; zf-C3H44; 1.
SMART; SM00238; BIR; 3.
SMART; SM00184; RIRG; 1.
SMART; SM00184; RING; 1.
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Q9ESE9;
01-MAR-2001 (TrEMBLrel. 16, Created)
01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
Inhibitor of apoptosis protein 1.
Rattus norvegicus (Rat).
Rattus norvegicus (Rat).
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rati
NCBI_TaxID=10116;
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96.48;
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Score 301; DB 11;
pred. No. 8.4e-32;
2; Mismatches 0;
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Pfam; PF00619; CARD; 1.
Pfam; PF00097; zf-C3HC4; 1.
SMART; SM00238; BIR; 3.
SMART; SM00114; CARD; 1.
SMART; SM00184; RING; 1.
SMART; SM00184; RING; 1.
PROSITE; PS01282; BIR_REPEAT_1; 2.
PROSITE; PS50143; BIR_REPEAT_2; 3.
PROSITE; PS50143; BIR_REPEAT_2; 3.
PROSITE; PS50209; CARD; 1.
Zinc-finger.
SEQUENCE 589 AA; 66750 MW; B41
                                                                                                                                                                                                                                                                                                                                                                     Q9QZC6;
Q9QZC6;
Q1-MAY-2000 (
Q1-MAY-2000 (
Q1-DEC-2001 (
Dong 2., Denton M., Gu S.M., Salkumar P., Venkatachalam "Cloning of cDNA for rat inhibitor of apoptosis protein submitted (SEP-199) to the EMBL/GenBank/DDBJ databases.

--- SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
EMBL; AF190020; AAF04585.1; --
HSSP; Q13490; 1QBH.
HSSP; Q13490; 1QBH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Holcik M., Lefebvre C.A., Hicks K., Korneluk R.G.; "Cloning and Characterization of the Rat Homologs of the Apoptosis Protein 1, 2, and 3 Genes."; Submitted (SEP-1999) to the EMBL/GenBank/DDBJ databases -- SIMILARITY: CONTAINS 1 RING-TYPE ZINC FIN: ERBL; AF183431; AAG22971.1; -.
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01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
Inhibitor of apoptosis protein 2.
Rattus norvegicus (Rat),
Eukaryota, Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae
                                                                                                                                                                                                                                                                      Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                         01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
Inhibitor of apoptosis protein 2.
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HSSP; Q13490; 1QBH
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IPR001315; CARD.
IPR001841; Znf_r
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Rodentia;
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94.5%;
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Pred. No. 7.2e
1; Mismatches
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RESULT
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Best Local
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0921N0;
01-DEC-2001 (TrEMBLrel. 1:
01-DEC-2001 (TrEMBLrel. 1:
01-JUN-2002 (TrEMBLrel. 2:
01-JUN-2002 (TrEMBLrel. 1:
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Best Local
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                                                                                                                                                                                                                                                                                                         Strausberg R.;
Submitted (JUL-2001) to the EMBL; BC011338. AAH11338.1;
MGD; MGI:1197007; Birc2.
InterPro; IPR001370; BIR.
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Pfam; PF00619; CARD; 1.
Pfam; PF00097; zf-C3HC4; 1
SMART; SM00238; BIR; 3.
SMART; SM00114; CARD; 1.
SMART; SM00184; RING; 1.
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                                                                     01-MAR-2001 (TrEMBLrel. 16, 01-MAR-2001 (TrEMBLrel. 16, 01-DEC-2001 (TrEMBLrel. 19, Apoptosis inhibitor ch-IAPI Gallus gallus (Chicken).
SEQUENCE FROM N.A. Pendleton C.N., Ba
                                                           Gallus gallus (Chicken).
Eukaryota; Metazoa; Chor
                                                                                                                                   Q9DDN2
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Mammalia; Eutheria;
                             NCBI_TaxID=9031;
                                                   Archosauria; Aves;
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InterPro; IPR001841;
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TE; PS01282; BIR_REPEAT_1; UNKNOWN_3.
TE; PS50143; BIR_REPEAT_2; 3.
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PS50143; BIR_REPEAT_2;
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 Bargmann
                                                  Neognathae;
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Rodentia;
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. 19, Last sequence update)
. 21, Last annotation update)
IAP repeat-containing 2.
 W.J.,
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1 (Fragment).
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1; Mismatches
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Pred.
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                                                  Craniata; Vertebrata; Euteleostomi;
; Galliformes; Phasianidae; Phasiani
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                                                                                                                                 PRT;
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  Varadarajan
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No. 9.
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No. 7
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Best Local S
Matches 44
                                                               Pfam; Pf00653; BIR; 3.
Pfam; Pf00619; CARD; 1.
Pfam; Pf00097; Zf-C3HC4; 1.
SMART; SM00238; BIR; 3.
SMART; SM00114; CARD; 1.
SMART; SM00184; RING; 1.
PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              -1- TISSUE SPECIFICITY: EXPRESSED AT RELATIVELY HIGH LEVELS SPLEEN, THYMUS, BURSA, INTESTINE, AND LUNG, AND AT VERY IN TESTIS, BRAIN, AND SKELETAL MUSCLE.
-1- INDUCTION: INDUCED DURING THE V-REL-MEDIATED TRANSFORMAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       057319
057319;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PROSITE; PS01282; BIR_REPEAT_1; PROSITE; PS50143; BIR_REPEAT_2; NON_TER 324 324
                                                                                                                                                                                                                                                                             -i- DOMAIN: THE RING FINGER IS IMPORTANT FOR ITS ANT-i- SIMILARITY: MEMBER OF THE IAP FAMILY.
-i- SIMILARITY: CONTAINS 3 BIR DOMAINS (BACULOVIRAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -i- SUBCELLULAR LOCATION: EXPRESSED PREDOMINANTLY IN THE V-REL-TRANSFORMED CELLS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "ch-IAP1, a member of the inhibitor of apoptosis protein family, is mediator of the antiapoptotic activity of the v-Rel oncoprotein."; mol. Cell. Biol. 17:7328-7341(1997).
-I- FUNCTION: SUPPRESSOR OF APOPTOSIS IN ONCOPNOTEIN V-REL-TRANSFORM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gallus gallus (Chicken).
Eukaryota; Metazoa; Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-JUN-1998 (TIEMBLIE1. 06, Created)
01-JUN-1998 (TIEMBLIE1. 06, Last sequence update)
01-JUN-2001 (TIEMBLIE1. 17, Last annotation update)
Inhibitor of apoptosis PROTEIN 1 (IAP) (Inhibitor of T cell apoptosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Interpro; IPR001370; BI
Pfam; PF00653; BIR; 3.
SMART; SM00238; BIR; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Submitted (OCT-2000) to t
EMBL; AF311289; AAG42316.
HSSP; Q13490; 1QBH.
                                           PROSITE; PS01282; BIR_REPEAT_1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRAIN-WHITE LEGHORN; TISSUE-EMBRYONIC FIBROBLAST;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PROTEINE).
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                                                                                                                                                                                                              InterPro;
                                                                                                                                                                                                                                 InterPro;
                                                                                                                                                                                                                                                       InterPro;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE-98038801;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=9031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Archosauria; Aves;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   'The apoptosis inhibitor ch-IAP1 '-Rel and c-Rel.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           σ
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                                                                                                                                                                                                                                                                                                                                                                                                                                             PROCESS.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ., Ku P.-T., Hrdlickova R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
  PS50143; BIR_REPEAT_2; PS50209; CARD; 1.
                                                                                                                                                                                                    IPR001370; BIR.
IPR001315; CARD.
IPR001841; Znf_ring.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IPR001370; BIR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   324 AA;
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; Galliformes; Phasianidae; Phasianinae;
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5.3e-25;
hes 6;
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Best Local Similarity
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Q8UWH2;
Q8UWH2;
Q1-MAR-2002
Q1-MAR-2002
Q1-JUN-2002
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01-MAR-2002
01-JUN-2002
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SEQUENCE
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REPEAT
REPEAT
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SMART; SM0023B; BIR; 3.
SMART; SM00114; CARD; 1.
SMART; SM00184; RING; 1.
                                                                                                                                                                                                                                                                                     Inohara N., Nunez G.;
Submitted (NOV-2001) to the
EMBL; AF442500; AAL33679.1;
Interpro; IPR001370; BIR.
                                                                                                                                                                                                                                                                                                                                                       Inohara N., Nunez G.;
"Genes with homology
zebrafish.";
                                                                                                                                                                                                                                                                                                                                                                                                                         Brachydanio rerio (Zebrafish) (Zebra danio).
Eukaryota; Metazoa; Chordata; Craniata; Vert
Actinopterygii; Neopterygii; Teleostei; Osta
Cyprinidae; Danio.
                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A. MEDLINE-20373792; PubMed-10917738;
                                                                                                                                                                SEQUENCE
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                                                                                                                                                                                                                                                                    InterPro; IPR001315; CARD. InterPro; IPR001841; Znf_r
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKRGDS
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                                                                                      ELFRISTYAKFPTTAAVTERSLARAGFYYTGLGDRVQCFRCNVTADNWQSGDCP
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                                                                                                                                                                         PS50089;
                                                                                                                                                                                PS01282; BIR_REPEAT_1;
PS50143; BIR_REPEAT_2;
PS50209; CARD; 1.
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                                       PRELIMINARY
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61.1%;
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Pred. No. 1.
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Pred. No. 3.7e
9; Mismatches
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3.7e-17;
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InterPro; 1700-11; 2nf_ring.
Pfam; pF00653; BIR; 3.
Pfam; pF00097; zf-C3HC4; 1.
SMARY; SM00138; BIR; 3.
SMARY; SM00134; RING; 1.
PROSITE; PS50143; BIR_REPEAT_2; 3.
PROSITE; PS50089; ZF_RING_2; 1.
PROSITE; PS50089; ZF_RING_2; 1.
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Best Local
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       Matches
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01-MAR-2002
01-JUN-2002
                                                                                       PROSITE; PS0128; BIR_REPEAT_1; UNKNOWN_2.
PROSITE; PS50143; BIR_REPEAT_2; 3.
PROSITE; PS50089; ZF_RING_2; 1.
SEQUENCE 493 AA; 55251 MW; 030A9F56CB6
                                                                                                                                                                                Pfam; PF00097; zf-C3HC4; 1.
SMART; SM00238; BIR; 3.
SMART; SM00184; RING; 1.
                                                                                                                                                                                                                                                                              Submitted (NOV-2001) to the EMBL/GenBank/DDBJ EMBL; AF451854; AAL47170.1; -. InterPro; IPR001370; BIR. InterPro; IPR001841; Znf_ring.
                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A. Bridgham J.T., Joh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A. Trochara N., Nunez
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Brachydanio rerio (Zebrafish) (Zebra danio).

Eukaryota; Metazoa; Chordata; Craniata; Vert.

Actinopterygii; Neopterygii; Teleostei; Osta.

Cyprinidae; Danio.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; (
Archosauria; Aves; Neognathae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gallus gallus (Chicken).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q8UVF8;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Inhibitor of apoptosis protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; AF439767; AAL32047.1;
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Genes with homology
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       29;
                        Similarity
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(TTEMBLrel. 20, Last sequence update)
(TTEMBLrel. 21, Last annotation update)
f apoptosis protein 3.
       Conservative
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n of chicken inhibitor of apoptosis protein
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54.7%;
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51.0%;
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Pred. No. 1e-17; Mismatches
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Pred. No. 8.1e-13;
9; Mismatches 16;
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; Galliformes; Phasianidae; Phasianinae;
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Ostariophysi; Cypriniformes;
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                                                                                                                                                  SEQUENCE FROM N.A.

STRAIN-WISTAR; TISSUE-OVARY;

Lareu R.R., Bradley C.K., Lacher M., Friis R.R., Dharmal

"Cloning, characterization and regulation of an inhibit

protein in the rat corpus luteum.";

Submitted (SEP-2000) to the EMBL/GenBank/DDBJ databases

-1-SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.

EMBL; AF30433; AAG41192.1;

EMBL; Q13490; 10BH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-MAR-2001 (TrEMBLrel 16, Las
01-JUN-2002 (TrEMBLrel 21, Las
Inhibitor of apoptosis protein
Rattus norvegicus (Rat)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PROSITE; PS01282; BIR_REPEAT_1; PROSITE; PS50143; BIR_REPEAT_2; 2inc-finger.
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01-JUN-2002 (TrEMBLrel. 21, Last annotation
Inhibitor of apoptosis protein 3.
                       InterPro; IPRO01370; BIR.
InterPro; IPRO01841; Znf_r1
Pfam; PF00653; BIR; 3.
Pfam; PF00097; Zf-C3HC4; 1.
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SMART; SM00238; BIR; 3.
SMART; SM00184; RING; 1.
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EMBL; AF183429; AAC
HSSP; Q13490; 1QBH
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Mammalia; Eutheria;
NCBI_TaxID=10116;
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NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa;
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InterPro; IPR001841;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKRGDS
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SM00238; BIR;
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27; Conserv
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Rodentia;
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Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          56117 MW;
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2nf_ring.
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                                                                                        Znf_ring
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16, Last sequence update)
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protein 3.
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3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 151; DB 11;
Pred. No. 8.9e-12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Craniata; Vert Sciurognathi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Rat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRT;
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Best Local
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                                                                                                                                                                          01-MAR-2001
01-MAR-2001
01-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SMART; SM00184; RING; 1.
PROSITE; PS01282; BIR_REPEAT_1;
PROSITE; PS50143; BIR_REPEAT_2;
Zinc-finger.
SEQUENCE 501 AA; 56548 MW; (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-MAR-2001 (TrEMBLrel. 16, Created)
01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
Inhibitor of apoptosis protein 3.
                                                    Viruses; dsDNA viruses,
Entomopoxvirus B.
CBI_TaxID=28321;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q9EQ04
SEQUENCE FROM N.A. MEDLINE=20396580;
                                                                                                                                          AMV021
                                                                                                                                                                                                                                           Q9EN27;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SMART; SM00238; BIR; 3
SMART; SM00184; RING; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pfam; PF00097; zf-C3HC4; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL; AF304334; AAG41193.1;
HSSP; Q13490; 1QBH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Submitted (SEP-2000) to the EMBL/GenBank/DDBU databases.
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"Cloning, c
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                                                                                                                   Amsacta moorei
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27; Conserv
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27; Conserv
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                                                                                                                                                                                                                                                           PRELIMINARY;
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                                                                                            viruses, no RNA stage;
PubMed-10936094;
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Znf_ring.
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8;
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Last sequence up
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Pred. No. 9e-12;
8; Mismatches 1
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Pred. No. 9
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Sciurognathi; Muridae; Murinae; Rat
                                                                                                                                                                                                                                                             PRT;
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                                                                                              Poxviridae;
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of an
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inhibitor of
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                                                                                              Entomopoxvirinae;
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SEQUENCE
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01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
Inhibitor of apoptosis 1 (Fragment)
Gallus gallus (Chicken).
Eukaryota, Metazoa; Chordata; Cranlata; Vertebrata; Eutel
Archosauria; Aves; Neognathae; Galliformes; Phasianidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    InterPro; IPR001841; Zn. Pfam; PF00653; BIR; 2. SMART; SM00238; BIR; 2. SMART; SM00184; RING; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRAIN-BREED LEGHORN; TISSUE-SPLEEN; MEDLINE-21158006; PubMed-11261557;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; AF250284; AA(HSSP; Q13490; 1QBH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Analysis and Comparison wit: Virology 274:120-139(2000).
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pROSITE; PS01282; BIR_REPEAT_1;
pROSITE; PS50143; BIR_REPEAT_2;
                                                                                                                                                                                                                                                                                                  Pfam; PF00653; BIR; 2.
SMART; SM00238; BIR; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                      specific
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PROSITE; PS50143; BIR_REPEAT_2; 2.
SEQUENCE 264 AA; 30547 MW; 2EB72DA4B58
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Moyer R.W.;
                                                                                                                                                                                                                                                                                                                                                                                        EMBL; AF221082;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Zhou H., Liu W., Lamont S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=9031;
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                                                                                                                                                                                                                                                                                                                                                                     ISSP; Q13490;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Genetic variation among chicken
                                                                                                                                                                                                                                                                                                                                             [nterPro;
119
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RESULT 15 Q9IA69

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ID 091A69 PRELIMINARY; PRT; 197 AA.

G. 091A69; DT 01-OCT-2000 (TERMELTel. 15, Created)
DT 01-OCT-2000 (TERMELTel. 15, Last sequence update)
DT 01-DCT-2001 (TERMELTel. 19, Last sequence update)
DT 01-DCT-2001 (TERMELTel. 19, Last sequence update)
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DC darluss gallus (Chicken).
C darluss gallus (Chicken).
C darluss gallus (Chicken).
C darluss gallus (Termens; Fhasianidae; Phasianinae;
CC darlus.
C darlus gallus (Termens).
RESTRAIN-BREED PAYOUNI; TISSUE-SPLEEN;
REDLIME-2118006; PubMed-11261557;
RR SEQUENCE FROM N.A.
REDLIME-2118006; PubMed-11261557;
RR ZGOUEN L. Liu W., Lamont S.J.;
RT "Genetic variation among chicken lines and mammalian species in repectific genes.",
RT "Genetic variation among chicken lines and mammalian species in repectific genes.",
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/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1990.DAT:*
/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1991.DAT:*
/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1992.DAT:*
/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1993.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                   Length
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AAW52703
AAY52703
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AAU97837
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r inhibitor of apop n in cells to reduc cal screening								ING finger domain; res				55 AA.	ALIGNMENTS	AAB48190 AAB48192	AAB48188 AAB48189	ABB67347	AAB48195	AAB48191 ABB09488	AAW04363 AAU75747	ABG65666	AAW19584 AAW69297	AAW19745	AAY59451	AAY99985	ABG0500/ AAW19581	AAW19585	AAW69299	ABG65668 AAW13555	ABG65665 AAW19586	AAY33998	AAW13545	AAW19746 AAW19583	AAW13547 AAU02925	
e or incresse								stinosis;						Drosophila mutant Drosophila mutant	wild-t mutant	Drosophila melanog	Drosophila mutant	Drosophila mutant AmEPV baculovirus-	Human Inhibitor of	20	Mouse apoptosis in Murine XIAP protei	Mouse inhibitor of	Human XIAP protein	Human XIAP protein Human X-linked inh	Human apoptosis in	m =	; ;	Mouse inhibitor of Murine c-IAP. Mus	Human inhibitor of Mouse apoptosis in	Human HIAP's proce	Human C-IAP1. Hom	Human inhibitor of	c-IAP1 repe	

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RESULT 2
AAW19747
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Best Local S
Matches 55
Isolated protein homologues of viral inhibitors of apoptosis - or modulate apoptosis for treatment of degenerative, infectious
                                    WPI; 1997-350966/32
N-PSDB; AAT72712.
                                                                         Vaux DL
                                                                                                                                                                        03-JUL-1997
                                                                                                                                                                                                                                                                                                       Region
                                                                                                                                                                                                                                                                                                                      Кeу
                                                                                                                                                                                                                                                                                                                                                                              Inhibitor of apoptosis protein; IAP; mammalian IAP homologue; MIHC; degenerative disease; infectious disease; autoimmune disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAW19747 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  inhibitor of apoptosis protein which modulates apoptosis regulation. The nucleic acids are useful in therapies where increased cell-specific apoptosis is desired, e.g. in restinosis, inflammatory disease states, myocardial infarction, glomerular nephritis, transplant rejection and infectious diseases, e.g. HIV. They can also be used in conditions requiring a reduction in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sequences derived from these human genes. The nucleic acid is used for recombinant production of human cellular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeats and/or a RING finger domain; in particular, at least two of a first domain repeat (AAW13547 or AAW13548), a second domain repeat (AAW13550), and a third domain repeat (AAW13551 or AAW13552) and/or a RING finger domain (AAW13553 or AAW13554), or a consensus
                                                                                                                      22-DEC-1995;
                                                                                                                                              20-DEC-1996;
                                                                                                                                                                                               WO9723501-A1
                                                                                                                                                                                                                                  Region
                                                                                                                                                                                                                                                         Region
                                                                                                                                                                                                                                                                                Region
                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                  Human inhibitor of apoptosis
                                                                                                                                                                                                                                                                                                                                                                                                                                        16-SEP-1997 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAW19747;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The human cellular inhibitor of apoptosis proteins (c-IAP1/2 - AAT61590/T61591) comprise a series of defined structural domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 3; Page 24; 35pp; English
                                                                                               (AMRA-) AMRAD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
55; Conserv
                                                                                                                                                                                                                                                                                                                                                                   therapy; diagnosis
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                                                                                                OPERATIONS PTY LTD
                                                                                                                      95AU-0007275
                                                                                                                                              96WO-AU00827
                                                                                                                                                                                                                                                     169..236
/label= BIR
255..323
                                                                                                                                                                                                                                /label= BIR
556..593
                                                                                                                                                                                                                                                                                                        Location/Qualifiers 29..97
                                                                                                                                                                                                                    /label= RING_finger
                                                                                                                                                                                                                                                                                             'label≃ BIR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Protein;
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Pred. No. 1.1e-34;
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RESULT 3
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Best Local S
Matches 55
Nucleic acid encoding an inhibitor of apoptosis polypeptide - used to inhibit apoptosis in e.g. HIV or AIDS patients, and for detection of susceptibility to apoptotic disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        baculovirus inhibitor of apoptosis protein (IAP). Its amino acid sequence was deduced from a cDNA clone (see also AA772712) isolated from a human foetal liver cDNA library using primers based on human EST sequences that resembled the BIR repeats of Orygia pseudotsuguta polyhedrosis virus IAP. IAP homologues (see also AAW19745-46 and AAW19748-52) and their derivatives and chemical analogues can be used in methods for modulating apoptosis in animal cells, specifically for treatment, by inhibition, of degenerative
                                                                                                                                                                                                                                                                                                                                                                                              Apoptosis inhibitor; HIAP-1; HIV; AIDS; neurodegeneration; myelodysplastic syndrome; ischaemia; myocardial infarction; stroke; reperfusion injury; toxin-induced liver disease; gene therapy;
                                                                                                                                 22-DEC-1995;
04-AUG-1995;
                                                                                                                                                                                                                  W09706255-A2
                                                                                                                                                                                                                                                     Domain
                                               N-PSDB;
                                                                                  Baird S,
                                                                                                                                                                   05-AUG-1996;
                                                                                                                                                                                            20-FEB-1997.
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                                                                                                                                                                                                                                                                                                                                      Key
                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                              Human apoptosis inhibitor HIAP-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       02-SEP-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAW19582 standard; Protein; 604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 9; Page 58-62; 136pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        autoimmune diseases
                                                                                                         (UYOT-) UNIV OTTAWA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               and infectious disease or, by promotion, of cancer and autoimmune
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                                                1997-154262/14.
DB; AAT70837.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKRGDSP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               55;
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                                                                                Korneluk RG,
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                                                                                                                                95US-0576956
95US-0511485
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                                                                                                                                                                                                                                                                                         /label=
                                                                                                                                                                                                                                                                                                               'label= BIR-1
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Pred. No. 1.7e-33;
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Claim

27; Page 72-74; 219pp; English.

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RESULT 4
AAW13546
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Best Local
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            The human cellular inhibitor of apoptosis proteins (c-IAP1/2-AAT61590/T61591) comprise a series of defined structural domain repeats and/or a RING finger domain; in particular, at least two of a first domain repeat (AAW13547 or AAW13548), a second domain repeat (AAW13549), and a third domain repeat (AAW13551), and a third domain repeat (AAW13551) or AAW13552) and/or a RING finger domain (AAW13553 or AAW13554), or a consensus sequences derived from these human genes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human XIAP, HIAP-1 and HIAP-2 and murine M-XIAP, M-HIAP-1 and M-HIAP-2 (AAM/19581-86) are a new class of mammalian proteins that are inhibitors of apoptosis (IAP) and which are characterised by the presence of a ring zinc finger domain (see also AAM/19587) and at least one BIR (baculovirus IAP repeat) domain (see also AAM/19588). The HIAP amino acid sequences were deduced from cDNA clones (AAT/10837 and AAT/10838) from a human liver library. IAP polypeptides can be expressed in host cells (in vitro or in vivo) and used in methods for treating diseases and disorders involving apoptosis, esp. in a neurodegenerative disease, a myelodysplastic syndrome or an ischaemic injury, seleted from myocardial infarction, stroke, reperfusion injury, or a toxin-induced liver disease.
                                                                                                                                 Disclosure;
                                                                                                                                                              apoptosis
                                                                                                                                                                                                                                                                                                                          08-DEC-1995;
08-AUG-1995;
                                                                                                                                                                                                                                                                                                                                                                                                    20-FEB-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IAP; inhibitor; apoptosis; RING finger domain;
myocardial infarction; nephritis; HIV.
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                                                                                                                                                                                           Nucleic
                                                                                                                                                                                                                        N-PSDB;
                                                                                                                                                                                                                                                                                              (TULA-)
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 nucleic acid
                                                                                                                                                                                                                       1997-154209/14.
DB; AAT61591.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKRGDSP 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                           sapiens
                                                                                                                                                                             for
                                                                                                                                                           acids encoding cellular inhibitor of apoptosis proteins for apoptosis regulation in cells to reduce or increase is and for pharmacological screening
                                                                                                                                                                                                                                                                   D۷,
                                                                                                                                                                                                                                                                                              TULARIK INC.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               604 AA;
                                                                                                                                 Page 21-23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%;
llarity 100.0%;
Conservative
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95US-0512946.
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recombinant prodn. of
                                                                                                                                 English
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human cellular
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                                                           apoptosis protein (IAP), and can be used in the method of the invention. The method is for enhancing apoptosis in cells from a mammal with proliferative disease by treatment with a compound that inhibits biological activity of an IAP or NAIP polypeptide. The inhibits biological activity of an IAP or NAIP polypeptide. The inhibitory compounds are used to treat proliferative diseases, specially cancers of ovary, breast, pancreas, lymph nodes, skin, blood, lung, brain, kidney, liver nasopharnyx, thyroid, central nervous system, prostate, colon, iver nasopharnyx or endometrium, particularly to increase their sensitivity to chemotherapeutic agents. High levels of the IAP or NAIP proteins are detected in many cancers and are associated with poor prognosis, resistance to chemotherapeutic agents and mutations in p53 (it is
              genes). Transgen 
oligonucleotides
                              resistance to chemotherapeutic agents and mutations in suggested that wild-type p53 suppresses transcription ogenes). Transgenic animals are used for testing the eff
                                                                                                                                                                                                                                         This sequence is the human HIAP-1 protein, which is a inhibitor apoptosis protein (IAP), and can be used in the method of the in
                                                                                                                                                                                                                                                                                             Disclosure; Fig 2; 147pp; English
                                                                                                                                                                                                                                                                                                                              Inducing apoptosis in proliferative mammalian cells with inhibitor of IAP or NAIP polypeptide - also methods for prognosis based on presence of IAP and NAIP, specifically applied to cancers involving p53 mutations
                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 1998-467164/40
N-PSDB; AAV55039.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Baird
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             13-FEB-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  inhibitor of apoptosis protein which modulates apoptosis regulation. The nucleic acids are useful in therapies where increased cell-specific apoptosis is desired, e.g. in restinosis, inflammatory disease states, myocardial infarction, glomerular nephritis, transplant rejection and infectious diseases, e.g. HIV. They can also be used in conditions requiring a reduction in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Tsang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             13-FEB-1997;
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55; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    604
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e disease;
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IAP; therapy; cancer; human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Liston
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                                  iption of th
the effects
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HIAP-1 protein.
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and

for screening

for the inhibitors

SS

Sequence

RESULT 7 AAY33997

AAY33997;

26-NOV-1999

(first entry)

AAY33997 standard;

Protein;

604

B

Cellular c-IAP-2;

prophylaxis; Inhibitor

of.

Apoptosis-2; infection; i

inflammation; antisense;

diagnostic; therapeutic; tumor formation.

Human cellular inhibitor of apoptosis-2 sequence.

밁 Qy

28

1 CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKRGDSP

Query Match Best Local Matches

Similarity

100.0%;

Score 308; DB 20; Pred. No. 1.7e-33;

Conservative

0

Mismatches

0

Indels Length

0 55

Gaps

0

604;

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RESULT 6
AAY52703
ID AAY!
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                                                A method has been developed of defining a set of compounds that modulate CC the expression of a target nucleic acid (tNA) sequence via binding of the compounds with the tNA sequence. The method comprises generating a CC library of virtual compounds in silico according to defined criteria, and conditions of the virtual compounds with the CC tNA according to defined criteria. Also described are: (1) a method of CC defining a set of oligonucleotides (ONS) that modulate the expression of CC a tNA sequence via binding of the ONS with the tNA sequence comprising CC generating a library of virtual compounds in silico according to defined CC criteria, and evaluating in silico the binding of the virtual ONS with the tNA according to defined criteria; and (2) a method of defining a CC binding of the compounds with the tNA. The method of defining a CC set of compounds that modulate the expression of a tNA sequence via CC set of compounds that modulate the expression of a tNA sequence via CC set of compounds that modulate the expression of a tNA sequence via CC set of compounds that modulate the expression of a tNA sequence via CC set of compounds that modulate the expression of a tNA sequence that CC assays of such compounds is used to identify nucleic acid sequences that CC are tractable to a variety of nucleotide sequence-based technologies, CC axemption of the present sequences used in the cream of the present sequences used in the compounds of the present sequences used in the compounds of the present sequences used in the compounds of the present sequences used in the compounds of the present sequences used in the compounds of the present sequences used in the compounds of the present sequences used in the compounds of the compounds of the present sequences used in the compounds of the compounds of the present sequences used in the compounds of the compounds of the compounds of the compounds of the compounds of the compounds of the compounds of the compounds of the compounds of the compounds of the compounds of the c
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Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Identifying compounds which modulate expression of nucleic acids, us to provide compounds having defined physical, chemical or bioactive properties, e.g. antisense activity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Identification; genetic target; gene modulation; human; antisense oligonucleotide; phosphorothioate; target validation; nucleotide sequence-based technology; antisense drug discovery.
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                                       exemplification of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Example 20; Page 197-202; 264pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             N-PSDB; AAZ41005
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28-APR-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (ISIS-) ISIS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         604
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
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98US-0067638
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rchers AH,
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Vickers TA;
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RESULT 8
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Best Local S
Matches 55
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                                                                                                                       ABG65664;
                                                                                                                                                                                  ABG65664 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The invention provides antisense compounds of 8-30 nucleotides that inhibit the expression of human Cellular Inhibitor of Apoptosis-2 (c-IAP-2). The antisense compounds may be used for diagnostics, therapeutics (for modulating the expression of c-IAP-2), prophylaxis
                                                          26-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Antisense compounds complementary to Cellular Inhibitor of useful for e.g. diagnostics, therapeutics, and as research
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N-PSDB; AAZ22096.
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55; Conser
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          604 AA;
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llarity 100.0%;
Conservative (
                                                       (first entry)
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                                                                                                                                                                                  604
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Pred. No. 1.7e-33;
; Mismatches 0;
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Apoptosis-2 reagents -

Indels Length

0;

Gaps

0

Human inhibitor of apoptosis, HIAP1

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RESULT 9
AAU97837
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CC The invention relates to an inhibitor of apoptosis (IAP) antisense concluded acid (I) that inhibits IAP biological activity, regardless of length of the antisense nucleic acid, the IAP proteins may be mouse correctly active the IAP proteins may be mouse correctly active the interest of the IAP antisense nucleic acid, the IAP proteins may be mouse correctly active in a call, comprising an activity and a method of composition comprising a mammalian IAP antisense molecule and a method of cenhancing apoptosis in a cell, comprising administering a negative regulator of the IAP anti-apoptotic pathway to the cell. The IAP cantisense inhibitor is useful for enhancing apoptosis in a cell in a mammal diagnosed with a proliferative disease. The method is useful for treating a patient diagnosed with a proliferative disease like cancer. CC The IAP antisense molecule is useful to treat, ameliorate, improve, sustain or prevent proliferative diseases (e.g. ovarian cancer, CC adenocarcinoma, lymphoma, pancreatic cancer,) and also in diseases or conditions where apoptosis is involved or implicated (e.g. embryonic development, viral pathogenesis, autoimmune disorders, neurodegenerative diseases, multiple sclerosis, lupus erythematosus and infection by herpes are content of the interest of the interest of the interest of the interest of the interest of the interest of the interest of the interest of the interest of the interest of the interest of the interest of the interest of the interest of the interest of the interest of the interest of the interest of the interest of the interest of the interest of the interest of the interest of the interest of the interest of the interest of the interest of the interest of the interest of the interest of the interest of the interest of the interest of the interest of the interest of the interest of the interest of the interest of the interest of the interest of the interest of the interest of the interest of the interest of the interest of the interest of the interest of the interest of 
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Best Local S
Matches 55
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Novel antisense inhibitor of apoptosis nucleic acid useful for enhancing apoptosis in a cell, for treating cancer and other proliferative diseases -
     Cystiene protease;
                                                  Human cystiene protease fusion protein AP12-MLT (CPG2).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Disclosure; Fig 2; 135pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         04-APR-2002
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens.
                                                                                                                                                   AAU97837;
                                                                                                                                                                                                AAU97837 standard; Protein; 1140 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           28-SEP-2000; 2000US-0672717
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(AEGE-) AEGERA THERAPEUTICS INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human; antisense; inhibitor of apoptosis; HIAP1; HIAP2; XIAP;
                                                                                                                                                                                                                                                                                                                       28
                                                                                                                                                                                                                                                                                                                                                                     سر
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2002-479562/51.
DB; ABK93870.
                                                                                                                                                                                                                                                                                                                     CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKRGDSP
                                                                                                                                                                                                                                                                                                                                                                                                                     1 Similarity
55; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     pox virus and adenovirus). The present sequence is a human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ន្ត
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   604 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2001WO-CA01379
                                                                                                  (first
CPG2; cell-cell adhesion; lymphoma; osteoporosis;
                                                                                                  entry)
                                                                                                                                                                                                                                                                                                                                                                                                                100.0%; Score 308; DB 23: 100.0%; Pred. No. 1.7e-33: tive 0; Mismatches 0:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Young
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 604;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            herpes
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CC equivalent. (1) is useful as a cysteine protease and for effecting CC cell-cell adhesion. A nucleic acid (II) encoding (I) is useful for expressing a protein that possesses cysteine protease activity. (I), CC (II), a vector (III) comprising (II), a ligand (IV) which binds (I) and CC diseases in which the expression of the natural gene or the activity of CC diseases in which the expression of the natural gene or the activity of CC the polypeptide is higher or lower in a diseased patient when compared CC to the level of expression or activity in a healthy patient. (I) - (V) CC are useful in therapy or diagnosis of disease and in the manufacture of CC a medicament for treating lymphoma, rheumatoid arthritis, osteoporosis, CC inflammatory disease, such as irritable bowel disease, respiratory CC disease such as asthma, autoimmune disease, bowel disease, cathorist, autoimmune disease, leukaemia, metastasis, heart disease, neupolastic diseases, such as melanoma, prostate, lung CC and ovary tumours, mycloproliferative disorder, leukaemia, metastasis, heart disease, neurological disorder, stroke, muscular dystrophy, CC liver disease, cataract, infection such as bacterial, parasitic, CC plasmodium and viral infection. A transgenic or knockout non-human animal CC a disease. This sequence encodes cystiene protease fusion protein cC adisease. This sequence encodes cystiene protease fusion protein cc AP12-MLT (CPG2) described in the invention.
                                                                                                                                           Matches
                                                                                                                                                                            Query Match
Best Local
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                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This sequence represents a polypeptide (I) termed BAA83099.1 (CPG1), AAD46161.1 (CPG2) or AAD38507.2 (CPG3), identified as a cysteine protease, its fragment having cysteine protease activity or having an antigenic determinant in common with the polypeptide, or its functional
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 1; Fig 15; 129pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          heart disease; myocardial infarction; cardiac failure; AP12-MLT; reperfusion injury; neurodegenerative disease; Alzheimer's disease; Parkinson's disease; neurological disorder; stroke; muscular dystro; liver disease; cataract; infection; transgenic animal; gene; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              rheumatoid arthritis; inflammatory disease; irritable bowel disease respiratory disease; asthma; autoimmune disease; bone disease; atherosclerosis; neoplastic disease; melanoma; prostate, lung tumo ovary tumour; myeloproliferative disorder; leukaemia; metastasis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2002-463311/49.
N-PSDB; ABK52387.
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29-JAN-2001; 2001GB-0002260
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (INPH-) INPHARMATICA LTD.
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   28
                                                                                                                                           Local Similarity
les 55; Conser
1140
                                                                                                                                           Conservative
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                                                                                                                                                                     .0%;
                                                                                                                                           0
                                                                                                                                    Score 308; DB 23;
Pred. No. 3.6e-33;
; Mismatches 0;
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                                                                                                                                                                                                         Length 1140;
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RESULT 10 AAB50694

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RESULT 11
AAW13547
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Best Local
                                                                                                                                                              Matches
                                                                                                                                                                                                                             to amplification using primers complementary to sequences which are on chromosome 11 region q21-22.3 and on chromosome 18 region q211-22. The method can be used for determining if a tissue sample or analogue comprises a chromosome (11:18) translocation associated with malignancies such as mucosa-associated lymphoid tissue lymphomas. The nucleic acid or the antibody may be used as a probe for detection, for hybridisation to southern blot cell DNAs or for in situ hybridisation of cells, or for determining the presence of complementary DNA. The present sequence represents the specifically claimed chimeric human apoptosis inhibitor 2 (API2)/MALT-lymphoma associated translocation (MLT) protein.
                                                                                                                                                                                                                                                                                                                                                                                       The
                                                                                                                                                                                                                                                                                                                                      The present invention describes a method for determining if a tissue sample comprises a cell with a chromosome (1:18) translocation associated with malignancies such as mucosa-associated lymphoid tissue (MALT) lymphomas. The method comprises subjecting a sample nucleic acid to amplification using primers complementary to sequences which are on
                                                                                                                                                                                                                                                                                                                                                                                                                                          Determining if a tissue sample has a chromosome (11:18) translocation associated with malignancies by amplifying a nucleic acid sample using primers complementary to chromosome 11 region q21-22.3 and chromosome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human; APIZ-MLT chimera; chimeric; apoptosis inhibitor 2; MLT; APIZ; mucosa-associated tymphoid tissue lymphoma associated translocation; chromosome 11 region q21-22.3; chromosome 18 region q21-1-22; molecular characterisation; chromosome translocation; carcinogenesis
         22-JUL-1997
                                 AAW13547;
                                                       AAW13547 standard;
                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                            Claim 12; Fig 5; 47pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                   primers complementary
18 region q21.1-22 -
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Synthetic
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                                                                                                                                                                      Local
                                                                                                                                 CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKRGDSP
                                                                                                              CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKRGDSP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2001-061556/07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        protein;
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                                                                                                                                                                         Similarity
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                                                                                                                                                            Conservative
       (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        malignancy.
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                                                     Protein;
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                                                                                                                                                                       100.0%;
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                                                     55
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                                                                                                                                                                      Score 308;
Pred. No. 3.
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                                                     B
                                                                                                                                                            Mismatches
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                                                                                                                                                          DB 22;
1.6e-33;
s ();
                                                                                                                                                            Indels
                                                                                                                                                                                 Length 1141;
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                                                                                                                                                           Gaps
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Query Match
Best Local
  Matches
                                                                                                                                                                                  The human cellular inhibitor of apoptosis proteins (c-IAP1/2 - AAT61590/T61591) comprise a series of defined structural domain repeats and/or a RING finger domain; in particular, at least two of a first domain repeat (AAW13547 or AAW13548), a second domain repeat (AAW13549 or AAW13550), and a third domain repeat (AAW13551 or AAW13552) and/or a RING finger domain (AAW13553 or AAW13554), or a consensus sequences derived from these human genes.

The nucleic acid is used for recombinant prodn. of human cellular inhibitor of apoptosis protein which modulates apoptosis regulation. The nucleic acids are useful in therapies where increased cell-specific apoptosis is desired, e.g. in restinosis, inflammatory disease states, myocardial infarction, glomerular mephricis, transplant rejection and infectious diseases, e.g. HIV.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Nucleic acids encoding cellular inhibitor of apoptosis proteins useful for apoptosis regulation in cells to reduce or increase apoptosis and for pharmacological screening
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IAP; inhibitor; apoptosis; RING finger
myocardial infarction; nephritis; HIV.
                                                                                              Sequence
                                                                                                                                           apoptosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 3; Page 23; 35pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Goeddel DV,
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08-AUG-1995;
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                   Similarity
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                                                                                                                                                                   transplant
lso be used
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Conservative
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950S-0512946
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                      97.7%;
98.2%;
                                                                                                                                                                      rejection and in conditions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          English
  0
                      Score 301; DB 1 Pred. No. 1e-33;
  Mismatches
                                                                                                                                                                   requiring
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                                               18;
                                                                                                                                                                      a reduction
                                            Length
  0;
  Gaps
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55
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RESULT 12
AAU02925
    Angiotensin converting enzyme splice variant; ACEV; interleukin 6; granulocyte colony stimulating factor receptor; glucagon; hypertrophy; platelat-derived endothelial cell growth factor; cardiovascular diseas cellular tumour antigen P53; cyclin-dependent kinase inhibitor IC;
vasoactive intestinal polypeptide receptor 2; arteriosclerósis; cance myocardial infarction; coronary arterial thrombosis; renal disease; diabetic nephropathy; muscular disease; immune disorder; sarcoidosis; multiple sclerosis; immune complex nephritis; deep vein thrombosis;
                                                                                                                                                                                                                                                                              AAU02925;
                                                                                                                                                                                          Angiotensin
                                                                                                                                                                                                                                                                                                                      AAU02925 standard; Protein; 306
                                                                                                                                                                                        converting enzyme (ACEV) splice variant protein
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cancer;

disease;

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AAW19746
ID AAW19746
AAW19746
AC AAW19
XX AW19
DT 16-SE
XX IN-ALIAN
DE Human
XX IN-ALIAN
KW IN-ALIAN
KW degen
KW cance
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XX Homo
XX Homo
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                                                                                                                                                                                                                                                                                                                                                                                                     CC The sequence represents an angiotensin converting enzyme splice variant CC (ACEV) polypeptide. The polypeptides of the invention include variants of CC granulocyte colony stimulating factor receptor, glucagon, interleukin 6, CC platelet-derived endothelial cell growth factor, cyclin-dependent kinase inhibitor 1C, cellular tumour antigen P53, and vasoactive intestinal polypeptide receptor 2. The polypeptides and their associated nucleic cards are useful for identification of variant sequences and detection of CC candidate compounds capable of binding the molecules. The sequences of the invention can be used in the treatment and diagnosis of various CC disorders including cardiovascular diseases such as arteriosclerosis, CC myocardial infarction and coronary arterial thrombosis, renal diseases such as diabetic nephropathy, muscular diseases such as hypertrophy, cancer, sarcoidosis, nonarcoidotic pulmonary granulomatous diseases such as asbestosis and vascular pathologies involving an endothelial cc abnormality such as deep vein thrombosis.
                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Novel alternative splicing variants e.g. variant of angiotensin converting enzyme (ACEV), useful in identifying candidate compounds capable of binding to the variant and to detect anti-variant antibodies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              17-NOV-1999;
10-DEC-1999;
                             Homo sapiens
                                                        cancer;
                                                                                                              Human
                                                                                                                                                                    AAW19746;
                                                                                                                                                                                                                                                                                                                                                                                 Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   nonarcoidotic pulmonary granulomatous disease; endothelial abnormality; vascular disorder; asbestosis.
                                                                       degenerative
                                                                                                                                          16-SEP-1997
                                                                                                                                                                                             AAW19746 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                   Inhibitor of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (COMP-) COMPUGEN LTD.
                                                                                                                                                                                                                                                                   45 CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKLGDSP
                                                                                                                                                                                                                                                                                1 CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKRGDSP
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                                                                                                          inhibitor of apoptosis protein homologue MIHB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAS06025
                                                      therapy;
                                                                                                                                                                                                                                                                                                                                      Similarity
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                                                                                                                                                                                                                                                                                                                                                                                 306
                                                                                                                                                                                                                                                                                                                         Conservative
                                                    apoptosis protein; IAP; mammalian %AP homologue; MIHB; disease; infectious disease; autoimmune disease; apy; diagnosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             25; 519pp; English
                                                                                                                                       (first entry)
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99IL-0133455
Location/Qualifiers
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98.2%;
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                                                                                                                                                                                               618
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7.2e-33;
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                                                                                                                                                                                                                                                                                                                                                  Length 306;
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AAW19583
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Best Local
              Key
Domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mammalian IAP homologue B (MIHB) (AAW19746) is a human homologue of baculovirus inhibitor of apoptosis protein (APP). Its amino acid sequence was deduced from a cDNA clone (see also AAT7271) isolated from a human foetal liver cDNA library using primers based on human EST sequences that resembled the IRF repeats of Orygin pseudotsuguta polyhedrosis virus IAP. IAP homologues (see also AAW19745 and AAW19747-52) and their derivatives and chemical analogues can be used in methods for modulating apoptosis in animal cells, specifically for treatment, by inhibition, of degenerative and infectious disease or, by promotion, of cancer and autoimmune
                                                                                              Apoptosis inhibitor; HIAP-2; HIV; AIDS; neurodegeneration; myelodysplastic syndrome; ischaemia; myocardial infarction; stroke; reperfusion injury; toxin-induced liver disease; gene therapy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Isolated protein homologues of viral inhibitors of apoptosis - used to modulate apoptosis for treatment of degenerative, infectious or autoimmune diseases and cancer
                                                       Homo sapiens
                                                                                                                                                    Human apoptosis inhibitor HIAP-2.
                                                                                                                                                                                02-SEP-1997
                                                                                                                                                                                                            AAW19583;
                                                                                                                                                                                                                                        AAW19583 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 8; Page 51-54; 136pp; English.
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                                                                                                                                                                                                                                                                                                                                                              Similarity 98.2
54; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                        618
                                                                                                                                                                                (first entry)
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/label=
              Location/Qualifiers 46..113
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        'label- BIR
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!69..337
                                                                                                                                                                                                                                        Protein; 618
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98.2%;
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Pred. No. 1.6e
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                                                                                                                                                                                                                                                                                                                                                                                                                                     AAW13545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 15
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human XIAP, HIAP-1 and HIAP-2 and murine M-XIAP, M-HIAP-1 and M-HIAP-2 (AAMI9581-86) are a new class of mammalian proteins that are inhibitors of apoptosis (IAP) and which are characterised by the presence of a ring zinc finger domain (see also AAMI9587) and at least one BIR (baculovirus IAP repeat) domain (see also AAMI9588). The HIAP amino acid sequences were deduced from cDNA clones (AAT70837 and AAT70838) from a human liver library. IAF polypeptides can be expressed in host cells (in vitro or in vivo) and used in methods for treating diseases and disorders involving apoptosis, esp. in a human diagnosed as HIV-positive or as having AIDS, a neurodegenerative disease, a myelodysplastic syndrome or an ischaemic injury, seleted from myocardial infarction, stroke,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Nucleic acid encoding an inhibitor of apoptosis polypeptide - used to inhibit apoptosis in e.g. HIV or AIDS patients, and for detection of susceptibility to apoptotic disease
                     20-FEB-1997
                                                                                                                                                                       IAP; inhibitor; apoptosis; RING finger domain; restinosis; myocardial infarction; nephritis; HIV.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 1997-154262/14.
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04-AUG-1995;
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                                                                         WO9706182-A1
                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                      Human c-IAP1.
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                                                                                                                                                                                                                                                                                                                                                          AAW13545;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     reperfusion injury, or a toxin-induced liver disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 27; Page 75-77; 219pp; English.
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                                                                                                                                                                                                                                                                                                         (first
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95US-0511485
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                                                                                                                                                                                                                                                                                                         entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      97.7%;
98.2%;
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Best Local :
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They can al
                                                                                                                                                                                                                                       The human cellular inhibitor of apoptosis proteins (c-IAP1/2 - AAT61590/T61591) comprise a series of defined structural domain repeats and/or a RING finger domain; in particular, at least two of a first domain repeat (AAW13547 or AAW13548), a second domain repeat (AAW13549) or AAW13550), and a third domain repeat (AAW13551 or AAW13552) and/or a RING finger domain (AAW13553 or AAW13554), or a consensus sequences derived from these human genes.

The nucleic acid is used for recombinant prodn. of human cellular inhibitor of apoptosis protein which modulates apoptosis regulation. The nucleic acids are useful in therapies where increased cell-specific apoptosis is desired, e.g. in restinosis, and the first of the control of apoptosis is desired, e.g. in restinosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Nucleic acids encoding cellular inhibitor of apoptosis proteins useful for apoptosis regulation in cells to reduce or increase apoptosis and for pharmacological screening
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N-PSDB; AAT61590.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             08-DEC-1995;
08-AUG-1995;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                         Disclosure; Page 18-20; 35pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Goeddel DV,
                                                                                                                                        Sequence
                                                                                                                                                                                        inflammatory disease states, myocardial infarction, glomerular nephritis, transplant rejection and infectious diseases, e.g. HIV. They can also be used in conditions requiring a reduction in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 1997-154209/14.
                                                                                                                                                                          apoptosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (TULA-) TULARIK INC.
45
                  1 CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKRGDSP 55
CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKLGDSP 99
                                                                      54;
                                                                                     Similarity
                                                                                                                                        618 AA;
                                                                    Conservative
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95US-0512946.
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Search completed: May 5, 2003, 16:01:59
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length: 2000000000
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1: /cgn2_6/ptodata/1,
2: /cgn2_6/ptodata/1,
3: /cgn2_6/ptodata/1,
4: /cgn2_6/ptodata/1,
5: /cgn2_6/ptodata/1,
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GenCore version 5.1.4_p5_4578 Copyright (c) 1993 - 2003 Compugen Ltd.
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/cgn2_6/ptodata/1/iaa/5B_COMB.pcp:*
/cgn2_6/ptodata/1/iaa/6A_COMB.pcp:*
/cgn2_6/ptodata/1/iaa/6A_COMB.pcp:*
/cgn2_6/ptodata/1/iaa/B_COMB.pcp:*
/cgn2_6/ptodata/1/iaa/PCTUS_COMB.pcp:*
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432.866 Million cell updates/sec
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PCT-US96-12860-8
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US-08-511-485-22
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US-09-212-971-6
US-09-617-053A-6
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US-08-569-749-8
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	141	141	145	145	145	145	145	177	177	177	177	177	182	182	182	182	182	235
	52.8	52.8	54.3	54.3	54.3	54.3	54.3	66.3	66.3	66.3	66.3	66.3	68.2	68.2	68.2	68.2	68.2	88.0
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ALIGNMENTS	US-09-239-867-4	US-08-511-485-25	US-08-511-485-13	US-09-239-867-2	US-09-332-319-4	US-09-121-979-4	US-08-511-485-15	US-09-617-053A-10	US-08-800-929A-10	US-09-212-971-10	US-08-511-485-10	US-08-511-485-20	US-09-617-053A-4	US-08-800-929A-4	US-09-212-971-4	US-08-511-485-4	US-08-511-485-21	US-09-617-053A-12
	Sequence 4, Appli	Sequence 25, Appl	Sequence 13, Appl	Sequence 2, Appli	Sequence 4, Appli	Sequence 4, Appli	Sequence 15, Appl	•	Sequence 10, Appl	•	Sequence 10, Appl	Sequence 20, Appl	Sequence 4, Appli	Sequence 4, Appli	Sequence 4, Appli	Sequence 4, Appli	•	Sequence 12, Appl

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; TOPOLOGY: 11; MOLECULE TYPE: US-08-569-749-8
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                                                                                                                                                                                                    REFERENCE/DOCKET NUMBER: A-62
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415)781-1989
TELEFAX: (415)398-3249
INFORMATION FOR SEQ ID NO: 8:
SEQUENCE CHARACTERISTICS:
LENGTH: 46 amino acids
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Matches
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APPLICANT: Goeddel, David V
TITLE OF INVENTION: INHIBITORS OF APOPTOSIS
NUMBER OF SEQUENCES: 14
CORRESPONDENCE ADDRESS:
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: PatentIn Rel
CURRENT APPLICATION DATA:
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                                                                                                                                                                                                                                                                                                                                    ATTORNEY/AGENT INFORMATION: NAME: Brezner, David J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STREE: Californ:
                                                                                                                                                                      LENGTH: 46 amino
TYPE: amino acid
STRANDEDNESS: sir
                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: FILING DATE: CLASSIFICATION: 514
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OPERATING SYSTEM: PC-DOS/MS-DOS
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                                                                                                                                                                                                                                                                                                                        REGISTRATION NUMBER:
               1 LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF 46
LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF 46
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Conservative 0;
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                                                          Score 267; DB 4;
Pred. No. 2.1e-28;
Mismatches 0;
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RESULT 2 PCT-US96-12860-8

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US-08-569-749-4
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APPLICANT: TULARIK, INC.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE CHARACTERISTICS:
LENGTH: 46 amino acids
TYPE: amino acid
STRANDEDNESS: single
CURRENT APPLICATION DATA:
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REFERENCE/DOCKET NUMBER: A-
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415)781-1989
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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CORRESPONDENCE ADDRESS:
ADDRESSEE: PT THE PROPERTY OF APOPTOSIS
                                                                                                                                                                                                                      NUMBER OF SEQUENCES: 1
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APPLICANT: Goeddel, David V
ITTLE OF INVENTION: INHIBITORS OF APOPTOSIS
                                COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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                                                                      MEDIUM TYPE: Floppy disk
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4 Embarcadero Center, Suite 3400
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                   PatentIn Release #1.0,
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Pred. No. 2.1e-23;
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                       SEQUENCE CHARACTERISTICS:
LENGTH: 604 amino acid
                                                                                                                                                                                                                                                                                 CLASSIFICATION:
ATTORNEY/AGENT INFORMATION:
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TITLE OF INVENTION: INHIBITORS OF APOPTOSIS
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                                                                                                        STRANDEDNESS:
                                                                                                                                                                                                                                  NAME: Brezner, David J.
REGISTRATION NUMBER: 24.
REFERENCE/DOCKET NUMBER:
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STRANDEDNESS: si
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           100.0%; Score 267; DB 5; 100.0%; Pred. No. 3.6e-27;
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Pred. No. 3.6e-27;
Mismatches
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                                                                                                                                 GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, v
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/511,485
FILING DATE: 04-AUG-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CLASSIFICATION:
ATTORNEY AGENT INFORMATION:
NAME: Clark Paul T.
REGISTRATION NUMBER: 30,162
                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE CHARACTERISTICS:
LENGTH: 67 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
               CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEPHONE: 617/542-5070
                              TITLE OF INVENTION:
TITLE OF INVENTION:
NUMBER OF SEQUENCES:
                                                                               APPLICANT: Mackenzie, Alexander E. APPLICANT: Baird, Stephen
                                                                                                                APPLICANT:
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                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: amino acid
STRANDEDNESS: not
TOPOLOGY: both
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ITLE OF INVENTION:
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STATE: MA
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   DDRESSEE:
                                                                                                                                                                                                                                            LARAGFYXIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF 66
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                                                                                                                                                               Application US/08511485
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nilarity 97.88;
Conservative
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Baird, Stephen
                                                                                                              Korneluk, Robert G
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Fish & Richardson P.C
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                                               PROBES, AND DETECTION
                                                                  MAMMALIAN IAP GENE FAMILY,
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                                                                                                                                                                                                                                                                                                           Score 264; DB 2;
Pred. No. 7.9e-28;
1; Mismatches 0,
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                                                 METHODS
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                                                                       ; LENGTH: 604
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-212-971-6
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Best Local :
                                                                                                                                                  SEQ ID NO 6
                                  Query Match
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                                                                                                                                                                                                                                       CURRENT APPLICATION NUMBER: US/09/212,971B CURRENT FILING DATE: 1998-12-16 EARLIER APPLICATION NUMBER: 00/017,354 EARLIER FILING DATE: 1996-04-26 EARLIER APPLICATION NUMBER: 60/030,590 EARLIER FILING DATE: 1996-11-14
                                                                                                                                                                  NUMBER OF SEQ ID N
SOFTWARE: FastSEQ
                                                                                                                                                                                                    EARLIER APPLICATION NUMBER: 08/800,929 EARLIER FILING DATE: 1997-02-13
                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: DETECTION AND MODULATION OF IAPS AND TITLE OF INVENTION: NAIP FOR THE DIAGNOSIS AND TREATMENT OF PROLIFERATIVE TITLE OF INVENTION: DISEASE FILE REFERENCE: 07891/009002
                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Tsang, Benjamin K
APPLICANT: Pratt, Christine
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELECOMMUNICATION INFORMATION:
TELEPHONE: 617/542-5070
TELEFAX: 617/542-8906
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MEDIUM TYPE: Floppy
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Local Similarity
nes 45; Conserv
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REGISTRATION NUMBER: 30,162
REFERENCE/DOCKET NUMBER: 07
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CLASSIFICATION: 514
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1 Similarity 97.88;
45; Conservation
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 Conservative
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IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
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) for Windows Version 4.0
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97.8%;
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                   Score 264; DB 3; Pred. No. 8.8e-27;
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Pred. No. 8.8e-27;
                                  Length 604;
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US-09-617-053A-6
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Sequence 6, Application US/09617053A Patent No. 6300492 GENERAL INFORMATION:
                                                                                                                                                                         Matches
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                                                                                                                                                                                                                                                                                                                                             INFORMATION FOR SEQ ID NO:
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PRIOR APPLICATION DATA:
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MEDIUM TYPE: Diskett
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APPLICANT:
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ATTORNEY/AGENT INFORMATION:
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ADDRESSEE: Clark & Elbing LLP
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TITLE OF INVENTION:
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                                                                                                         189 LARAGEYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF 234
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/03
FILING DATE: 14-NOV-1996
APPLICATION NUMBER: 60/01
FILING DATE: 26-APR-1996
                                                                                                                                                                     Local Similarity
les 45; Conserv
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                                                                                                                          1 LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF 46
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Pratt, Christine
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97.88;
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for Windows Version
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SEQ ID NO 6
LENGTH: 604
TYPE: PRT
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Best Local Similarity
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                                                            TELEFAX: (415)398-3249
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 46 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
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CURRENT APPLICATION NUMBER: US/09/617,053A
CURRENT FILING DATE: 2000-07-14
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                        TELEPHONE: (415)781-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Goeddel, David V
TITLE OF INVENTION: INHIBITORS OF APOPTOSIS
NUMBER OF SEQUENCES: 14
MOLECULE TYPE:
                                                                                                                                                                                                      ATTORNEY/AGENT INFORMATION:
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                                                                                                                                                                                                                                       APPLICATION NUMBER: FILING DATE:
                TOPOLOGY:
                            STRANDEDNESS:
                                                                                                                                                            REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                          CLASSIFICATION: 514
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                                           i: 46 amino acids amino acid
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                                                                                                                                                                                                                                                                                                                                                                                                                    San Francisco
                                                                                                                                                                                        Brezner, David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Korneluk, Robert G
                                                                                                                                                                                                                                                                                                                                                                                                    California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pratt,
                                                                                                                                                                                                                                                                                                                                                                                                                                   4 Embarcadero Center,
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                linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                      FLEHR,
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97.8%;
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                                                                                                                                                                                                                                                        US/08/569,749
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                                                                                                                                                            A-62464/DJB
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Pred. No. 8.8e-27;
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                                                                                                                                                                                                                                                                                                                                                                                                                                     Suite 3400
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92.9%;

Score 248;

DB 4;

91.3%;

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Best Local Similarity
Matches 42; Conserv
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                                                                                                                                                          Patent No.
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Matches 42; Conservative
                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
                          CORRESPONDENCE ADDRESS
                                                            TITLE OF INVENTION: MAMMALIAN IAP GENE FAMILY, PRIMERS, TITLE OF INVENTION: PROBES, AND DETECTION METHODS
                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGY: linear MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE CHARACTERISTICS:
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                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
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                                                NUMBER OF SEQUENCES:
                                                                                              APPLICANT:
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CITY: San Francisco
CITY: San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                      STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: PCT/
FILING DATE: 06 AUG 1996
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OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REGISTRATION NUMBER: 24,774
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: U.S. Serial Nos. 08/512,946 & 08/569,749
                                                                                                                                                                                                                                                                           1 LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DDRESSEE:
                                                                                                                                                            3, Application US/08511485
5919912
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amino acid
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225 Franklin Street
                                                                                              Baird, Stephen
                                                                                                          Mackenzie, Alexander E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (415)398-3249
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Pred. No. 6.6e-26;
2; Mismatches 2
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RESULT 13
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILANCE CLARK INFORMATION:
ATTORNEY/AGENT INFORMATION:
NAME: Clark, Paul T.
NAME: Clark, Paul T.
NAME: O. NIMBER: 30,162
                                                                                                                                                                            OPERATING SYSTEM: MS-DOS
SOFTWARE: WORD PERFECT 5.1
CURRENT APPLICATION DATA:
 TELEPHONE: 201-994-1700
                             ATTORNEY/AGENT INFORMATION:
NAME: FERRARO, GREGORY D.
REGISTRATION NUMBER: 36,134
REFERENCE/DOCKET NUMBER: 32
                                                                                                                                                                                                                                        COMPUTER READABLE FORM: MEDIUM TYPE: 3.5 INC
                                                                                                                     PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION: Human Inhibitor of Apoptosis Gene NUMBER OF SEQUENCES: 8
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TELEPHONE: 617/542-5070
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: FILING DATE: 11 MA CLASSIFICATION:
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STATE:
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TELEPHONE:
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                                                                                                                                                                                                                                                                                                                     CITY:
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Local Similarity 91.38;
les 42; Conservative
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02110-2804
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SYSTEM: PC-DOS/MS-DOS
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Pred. No. 1e-25;
2; Mismatches
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; TOPOLOGY: LINEAR; MOLECULE TYPE: PROTEIN PCT-US95-05922A-2

STRANDEDNESS:

INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS: LENGTH: 438 AMINO ACID

2:

TYPE: AMINO ACID

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RESULT 15
US-09-212-971-8
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                                                                                                                                                     ; TOPOLOGY: both ; MOLECULE TYPE: protein US-08-511-485-8
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US-08-511-485-8
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Best Local Similarity 91.3
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Best Local
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APPLICANT: KOINELLK, Robert G.
APPLICANT: Mackenzie, Alexander E.
APPLICANT: Baird, Stephen
                                                                                                                                                                                                                 INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS: LENGTH: 618 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY: USA
ZIP: 02110-2804
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                 TELECOMMUNICATION INFORMATION:
TELEPHONE: 617/542-5070
TELEFAX: 617/542-8906
                                                                                                                                                                                                                                                                                                                                           ATTORNEY/AGENT INFORMATION:
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ADDRESSEE: Fish & Richardson P.C
STREET: 225 Franklin Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES:
                                                  204
                                                                                                                                                                                      STRANDEDNESS:
                                                                                                  Local Similarity 91...
es 42; Conservative
                                                                                                                                                                                                   TYPE: amino acid
                                                                                                                                                                                                                                                                                                         REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                 NAME: Clark, Paul T.
REGISTRATION NUMBER: 30,162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               24 LARAGFYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCPF 69
                                                             1 LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF 46
                                               8, Application US/08511485
5, 5919912
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                                                                                                              92.98;
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                                                                                                 Score 248; DB 2;
Pred. No. 1.2e-24;
2; Mismatches 2;
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Pred. No. 7.
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.9e-25;
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                                                                                                                         Length 618;
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                                                                                                                                  Query Match
Best Local Similarity
Thes 42; Conserve
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; SEQ ID NO 8
; LENGTH: 618
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-212-971-8
Search completed: May 5, 2003, 16:09:11 Job time: 4.12673 secs
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                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION NUMBER: US/09/212,971B
CURRENT FILING DATE: 1998-12-16
EARLIER APPLICATION NUMBER: 60/017,354
EARLIER FILING DATE: 1996-04-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION: NAIP FOR TITLE OF INVENTION: DISEASE FILE REFERENCE: 07891/009002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                          EARLIER APPLICATION NUMBER: 60/030,590 EARLIER FILING DATE: 1996-11-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION: DETECTION AND MODULATION OF IAPS AND TITLE OF INVENTION: NAIP FOR THE DIAGNOSIS AND TREATMENT OF PROLIFERATIVE
                                                                                                                                                                                                                                                                                                                                                   EARLIER FILING DATE: 1997-02-13 NUMBER OF SEQ ID NOS: 17
                                                                                                                                                                                                                                                                                                                                                                                       EARLIER APPLICATION NUMBER: 08/800,929
                                                                         1 LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tsang, Benjamin K
Pratt, Christine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Baird, Stephen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MacKenzie,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Korneluk,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Liston,
                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Peter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Robert G
                                                                                                                                                                      92.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Alexander E
                                                                                                                                                                      Score 248; DB 3;
Pred. No. 1.2e-24;
                                                                                                                                                                                          Length 618;
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GenCore version 5.1.4_p5_4578 Copyright (c) 1993 - 2003 Compugen Ltd.

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Result
No.
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Maximum DB seq length: 200000000
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                                                                                                                                                                                                                                                                                                                                                                                       Score
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267
1 LAKAGFYYIGPGDRVACFAC.....WEFKDNAMSEHLRHFPKCPF
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     Published_Applications_AA: *
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Listing first 45 summaries
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/cgn2_6/ptodata/2/pubpaa/US07_PUBCOMB.pep:*
/cgn2_6/ptodata/2/pubpaa/PCTUS_FUBCOMB.pep:*
/cgn2_6/ptodata/2/pubpaa/PCTUS_FUBCOMB.pep:*
/cgn2_6/ptodata/2/pubpaa/US09_NEW_PUB.pep:*
/cgn2_6/ptodata/2/pubpaa/US09_NEW_PUB.pep:*
/cgn2_6/ptodata/2/pubpaa/US09_PUBCOMB.pep:*
1. /cgn2_6/ptodata/2/pubpaa/US10_NEW_PUB.pep:*
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                 US-09-201-936-22
US-09-974-592-6
UUS-09-978-927A-62
US-09-201-936-23
US-09-201-936-8
US-09-201-936-8
US-09-201-936-8
US-09-974-592-14
US-09-974-592-12
US-09-974-592-12
US-09-974-592-12
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US-09-974-592-14
US-09-974-592-14
US-09-974-592-4
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Sequence 22, Appli
Sequence 6, Appli
Sequence 62, Appli
Sequence 23, Appli
Sequence 24, Appli
Sequence 14, Appli
Sequence 14, Appli
Sequence 14, Appli
Sequence 12, Appli
Sequence 21, Appli
Sequence 21, Appli
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sequence 2, Appli sequence 15, Appl		14,	13	30,	19,	26,	12,	11,	17,	Sequence 29, Appl	18	19	Sequence 12, Appl	Sequence 18, Appl	Sequence 28; Appl	27	Sequence 24, Appl	Sequence 24, Appl	Sequence 22, Appl	e 39	Sequence 20, Appl	Sequence 25, Appl	Sequence 13, Appl	Sequence 15, Appl

ALIGNMENTS

RESULT 1 US-09-201-936-22

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TITLE OF INVENTION: MAMMALIAN IAP GENE FAMILY, PRIMERS,
TITLE OF INVENTION: PROBES, AND DETECTION METHODS
FILE REFERENCE: 07891/003003
CURRENT APPLICATION NUMBER: US/09/201,936
CURRENT FILING DATE: 1998-12-01
EARLIER APPLICATION NUMBER: 09/011,356
EARLIER FILING DATE: 1998-02-04
EARLIER APPLICATION NUMBER: PCT/IB96/01022
EARLIER FILING DATE: 1996-08-05
EARLIER FILING DATE: 1996-08-05
EARLIER FILING DATE: 1996-08-05
EARLIER FILING DATE: 1995-11-22
EARLIER FILING DATE: 1995-08-04
EARLIER FILING DATE: 1995-08-04
EARLIER APPLICATION NUMBER: 08/511,485
EARLIER APPLICATION NUMBER: 08/511,485
EARLIER FILING DATE: 1995-08-04
RESULT 2
US-09-201-936-6
; Sequence 6, Application US/09201936
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SOFTWARE: FRASTSEQ for Windows Version 3.0
SEQ ID NO 22
LENGTH: 67
TYPE: PRT
ORGANIZSM: Homo sapiens
US-09-201-936-22
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Matches
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                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Korneluk, Robert G. APPLICANT: MacKenzie, Alexander E.
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                                                                                                                  Local Similarity
                                                                                                                                                                                                              45;
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                                                                                                                                                                                                       Score 264; DB 9;
Pred. No. 1.7e-26;
1; Mismatches 0
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Publication No. US20020187946A1

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CURRENT FILING DATE: 1998-12-01
EARLIER APPLICATION NUMBER: 09/011,356
EARLIER FILING DATE: 1998-02-04
EARLIER APPLICATION NUMBER: PCT/IB96/01022
EARLIER FILING DATE: 1996-08-05
EARLIER APPLICATION NUMBER: 08/576,956
EARLIER APPLICATION NUMBER: 08/576,956
EARLIER APPLICATION NUMBER: 08/511,485
EARLIER APPLICATION NUMBER: 08/511,485
EARLIER FILING DATE: 1995-08-04
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Matches 45
                                                                                                                                                                                                SEQ ID NO 6
LENGTH: 604
TYPE: PRT
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LENGTH: 604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Patent No.
                                                                                                                                                                                                                                                           NUMBER OF SEQ ID NOS: 17
SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                PRIOR FILING DATE: 2000-07-14
PRIOR APPLICATION NUMBER: US 08/800,929
PRIOR FILING DATE: 1997-02-13
                                                                                                                                                                                                                                                                                                                                                      CURRENT APPLICATION NUMBER: US/09/974,592
CURRENT FILING DATE: 2001-10-09
PRIOR APPLICATION NUMBER: US 09/617,053
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APPLICANT: Baird, Stephen
APPLICANT: Liston, Peter
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APPLICANT: Pratt, Christine
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Korneluk, Robert G
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
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                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION: DETECTION AND MODULATION OF IAPS AND VITTLE OF INVENTION: NAIP FOR THE DIAGNOSIS AND TREATMENT OF PROLIFERATIVE OF INVENTION: DISEASE PROLIFERANCE: 07891/009004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TILE OF INVENTION: MAMMALIAN IAP GENE FAMILY, PRIMERS ITLE OF INVENTION: PROBES, AND DETECTION METHODS
189 LARAGEYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHF17KCPF 234
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                  1 LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF 46
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45; Conserv
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97.8%;
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                                                                                               Score 264; DB 10;
Pred. No. 1.9e-25;
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Pred. No. 1.9e-25;
1; Mismatches 0
                                                                              Mismatches
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; LENGTH: 67
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-201-936-23
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                 Query Match
Best Local
                                                                                                                                          SOFTWARE: F
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Best Local :
Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQ ID NO 62
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/09/778,927A
CURRENT FILING DATE: 2001-02-08
PRIOR APPLICATION NUMBER: IL 134453
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TITLE OF INVENTION: NOVEL NUCLEIC ACID AND AMINO ACID
TITLE OF INVENTION: VARIANTS OF ALTERNATIVE SPLICING
                                                                                                                                                                                                                 EARLIER APPLICATION NUMBER: 08/576,956
EARLIER FILING DATE: 1995-12-22
EARLIER APPLICATION NUMBER: 08/511,485
                                                                                                                                                                                                                                                                                                                         CURRENT FILING DATE: 1998-12-01
EARLIER APPLICATION NUMBER: 09/011,356
                                                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION: MAMMALIAN IAP GENE FAMILY, TITLE OF INVENTION: PROBES, AND DETECTION METHFILE REFERENCE: 07891/003003
                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: MacKenzie, Alex
APPLICANT: Baird, Stephen
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                                                                                                                                                                                NUMBER OF SEQ ID NOS:
                                                                                                                                                                                               EARLIER FILING DATE: 1995-08-04
                                                                                                                                                                                                                                                                      EARLIER APPLICATION NUMBER: PCT/IB96/01022
EARLIER FILING DATE: 1996-08-05
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILE REFERENCE: 2786-0160P
                                                                                                                                                                                                                                                                                                            EARLIER
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ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OTHER INFORMATION: Xaa - any amino acid, unknown,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME/KEY: misc_feature LOCATION: (1)..(306)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         204 LARAGFYYIGPGDRVACEACGGKLSNWEPKDNAMSEHLRHFPNCPF 249
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                                                                                                                                                                                                                                                                                                            FILING DATE: 1998-02-04
                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US/09/201,936
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               Similarity
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                                                                                                                                                             FastSEQ for
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No. US20020187946A1
Conservative
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                                                                                                                                                             Windows Version 3.0
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               92.98;
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               Score 248; DB 9;
Pred. No. 1.8e-24;
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Pred. No. 3.
Mismatches
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.8e-25;
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                                Length 67;
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Indels
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                                                                                                                                                                                                                                                                                                 US-09-201-936-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; MOLECULE TYPE: PROTEIN US-08-464-588-2
                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 91.3
Conservative
                                                                                                                                                                                                                                 Sequence 8, Application US/09201936 Publication No. US20020187946A1 GENERAL INFORMATION:
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                                                       CURRENT APPLICATION NUMBER: US/09/201,936
CURRENT FILING DATE: 1998-12-01
                                                                                           TITLE OF INVENTION: MAMMALIAN IAP GENE FAMILY, TITLE OF INVENTION: PROBES, AND DETECTION METHERILE REFERENCE: 07891/003003
                                                                                                                                                    APPLICANT: MacKenzie, Alexander E
APPLICANT: Baird, Stephen
APPLICANT: Liston, Peter
                EARLIER APPLICATION NUMBER: 09/011,356
EARLIER FILING DATE: 1998-02-04
                                                                                                                                                                                                              APPLICANT: Korneluk, Robert G
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LENGTH: 438 AMINO ACIDS
TYPE: AMINO ACID
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REFERENCE/DOCKET NUMBER: 32:
TELECOMMUNICATION INFORMATION:
TELEPHONE: 201.994-1700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08,
FILING DATE: June 5, 1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 INCH DISKE
COMPUTER: IBM PS/2
OPERATING SYSTEM: MS-DOS
SOFTWARE: WORD PERFECT 5.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 11 MAY 1995
ATTORNEY/AGENT INFORMATION:
NAME: FERRARO, GREGORY D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION: 514
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES: 8
CORRESPONDENCE ADDRESS:
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                                                                                                                                                                                                                                                                                                                                                                              24 LARAGFYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCPF 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: PCT/1
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                                                                                                                                                                                                                                                                                                                                                                                              1 LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPK;PF 46
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APPLICATION NUMBER: PCT/IB96/01022
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NEW JERSEY
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; SEQ ID NO 8
; LENGTH: 618
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-974-592-8
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Matches
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LENGTH: 618
TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
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                                                                                                                                                        GENERAL INFORMATION:
                                                                                                                                                                             Patent No. US2002
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Best Local Similarity
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                                                     APPLICANT: Korneluk, Robert G
APPLICANT: MacKenzie, Alexand
APPLICANT: Liston, Peter
APPLICANT: Baird, Stephen
APPLICANT: Tsang, Benjamin K
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EARLIER APPLICATION NUMBER: 08/576,956
EARLIER FILING DATE: 1995-12-22
EARLIER APPLICATION NUMBER: 08/511,485
EARLIER FILING DATE: 1995-08-04
NUMBER OF SEQ ID NOS: 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION NUMBER: US/09/974,592
CURRENT FILING DATE: 2001-10-09
PRIOR APPLICATION NUMBER: US 09/617,053
PRIOR FILING DATE: 2000-07-14
PRIOR APPLICATION NUMBER: US 08/800,929
PRIOR APPLICATION NUMBER: US 08/800,929
PRIOR FILING DATE: 1997-02-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Tsang, Benjamin K
APPLICANT: Pratt, Christine
TITLE OF INVENTION: DETECTION AND MODULATION OF IAPS AND
TITLE OF INVENTION: NAIP FOR THE DIAGNOSIS AND TREATMENT OF PROLIFERATIVE
TITLE OF INVENTION: DISEASE
TITLE OF INVENTION: DISEASE
FILE REFERENCE: 07891/009004
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                                                                                                                                                                                                                                                                                              204 LARAGFYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCPF 249
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les 42; Conserv
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INVENTION: DETECTION AND MODULATION OF IAPS AND INVENTION: NAIP FOR THE DIAGNOSIS AND TREATMENT OF PROLIFERATIVE
                                     Baird, Stephen
Tsang, Benjamin K
Pratt, Christine
                                                                                            MacKenzie, Alexander
Liston, Peter
                                                                                                                                                                                             Application US/09974592
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Pred. No. 2.1e-23;
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Pred. No. 2.1e-23;
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RESULT 11
US-09-974-592-12
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; ORGANISM: Mus musculus
US-09-974-592-14
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SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 42
LENGTH: 591
                                                                              GENERAL INFORMATION:
                                                                                              Sequence 12, Application US/09974592 Patent No. US20020120121A1
                                                                                                                                                                                                                                                                                               Matches
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION: MAMMALIAN IAP GENE FAMILY, PRIMERS, TITLE OF INVENTION: PROBES, AND DETECTION METHODS FILE REFERENCE: 07891/03003 CURRENT APPLICATION NUMBER: US/09/201,936 CURRENT FILING DATE: 1998-12-01
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EARLIER FILING DATE: 1995-08-04
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CURRENT FILING DATE: 2001-10-09
PRIOR APPLICATION NUMBER: US 09/617,053
PRIOR FILING DATE: 2000-07-14
PRIOR APPLICATION NUMBER: US 08/800,929
PRIOR APPLICATION NUMBER: US 08/800,929
PRIOR FILING DATE: 1997-02-13
                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EARLIER APPLICATION NUMBER: 08/576,956 EARLIER FILING DATE: 1995-12-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EARLIER APPLICATION NUMBER: 09/011,356 EARLIER FILING DATE: 1998-02-04
                                        APPLICANT:
                                                          APPLICANT:
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                                                                                                                                                                                                                                                                                                                                                                                         TYPE: PRT
ORGANISM: Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILE REFERENCE: 07891/009004
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                                                                                                                                                                                                                   176 LARAGEYYIGPGDRVACFACGGKLSNWEPKDYAMSEHRRHFPHCPF
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                                                        Korneluk, Robert G
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Liston, Peter
Baird, Stephen
                                  MacKenzie, Alexander
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91.3%;
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91.3%;
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Pred. No. 6.3e-23;
1; Mismatches 3
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                               Length 591;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 612;
                                                                                                                                                                                                                                                                                           Indels
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TITLE OF INVENTION: MAMMALIAN IAP GENE FAMILY, PRIMERS,
TITLE OF INVENTION: PROBES, AND DETECTION METHODS
FILE REFERENCE: 07891/03003
CURRENT APPLICATION NUMBER: US/09/201,936
CURRENT FILING DATE: 1998-12-01
EARLIER APPLICATION NUMBER: 09/011,356
EARLIER FILING DATE: 1998-02-04
EARLIER APPLICATION NUMBER: 09/01022
EARLIER APPLICATION NUMBER: 08/576,956
EARLIER APPLICATION NUMBER: 08/576,956
EARLIER APPLICATION NUMBER: 08/576,956
EARLIER APPLICATION NUMBER: 08/576,956
EARLIER APPLICATION NUMBER: 08/576,956
RESULT 13
US-09-201-936-21
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US-09-201-936-40
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US-09-974-592-12
                                                                                                                                                                                                                                          US-09-201-936-40
                                                                                                                                                                                                                                                               SEQ ID NO 40
LENGTH: 602
TYPE: PRT
ORGANISM: Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
Matches 41; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 12
LENCTH: 600
TYPE: PRT
                                                                                                                                                            Matches
                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 40, Ap
Publication No.
                                                                                                                                                                               Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CURRENT APPLICATION NUMBER: US/09/974,592
CURRENT FILING DATE: 2001-10-09
PRIOR APPLICATION NUMBER: US 09/617,053
PRIOR FILING DATE: 2000-07-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION NUMBER: US 08/800,929
PRIOR FILING DATE: 1997-02-13
NUMBER OF SEQ ID NOS: 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION: NAIP FOI TITLE OF INVENTION: DISEASE FILE REFERENCE: 07891/009004
                                                                                                                                                                                                                                                                                                                                              SOFTWARE: FastSEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQ
                                                                                                                                                                                                                                                                                                                                                                                  EARLIER FILING DATE: 1995-08-04
                                                                                                                                                                                                                                                                                                                                                                                                     EARLIER APPLICATION NUMBER: 08/511,485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION: DETECTION AND MODULATION OF IAPS AND TREATMENT OF PROLIFERATIVE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    187 LAKAGFYYIGPGDRVACFACDGKLSNWERKDDAMSEHQRHFPSCPF 232
                                                                                 189 LAKAGFYYIGPGDRVACFACDGKLSNWERKDDAMSEHQRHFPSCPF 234
                                                                                                1 LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF 46
                                                                                                                                                              41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Baird, Stephen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MacKenzie,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Korneluk, Robert G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Liston, Peter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Application US/09201936
                                                                                                                                                            Conservative
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Christine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Alexander E.
                                                                                                                                                                               88.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  88.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 235; DB 1
Pred. No. 9e-22;
1; Mismatches
                                                                                                                                                                               Score 235; DB 9
Pred. No. 9e-22;
                                                                                                                                                              Mismatches
                                                                                                                                                                                                    DB 9;
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                                                                                                                                                                                                    Length 602;
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Sequence 21, Application US/09201936 Publication No. US20020187946A1

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RESULT 15
US-09-201-936-4
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SOFTWARE: FASTSEQ for Windows Version 3.0
SEQ ID NO 21
LENGTH: 68
TYPE: PAT
ORGANISM: Homo sapiens
US-09-201-936-21
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                                                                                                                                                                                                                                                                                                                                                                      ; ORGANISM: Homo sapiens US-09-965-967-21
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US-09-965-967-21
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CURRENT FILING DATE: 1998-12-01
EARLIER APPLICATION NUMBER: 09/011,356
EARLIER FILING DATE: 1998-02-04
EARLIER APPLICATION NUMBER: PCT/IB96/01022
EARLIER FILING DATE: 1996-08-05
EARLIER APPLICATION NUMBER: 08/576,956
EARLIER FILING DATE: 1995-12-22
EARLIER APPLICATION NUMBER: 08/511,485
EARLIER APPLICATION NUMBER: 08/511,485
EARLIER APPLICATION NUMBER: 08/511,485
                      APPLICANT: Korneluk
                                                                                                                                                                                                                                                                                                       Query Match
Best Local :
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
Matches 32; Conserv
                                                                Sequence 4, Application US/09201936 Publication No. US20020187946A1
                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQ ID NO 21
LENGTH: 110
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION: Compositions And Methods For Regulating Apoptosis FILE REFERENCE: PU-0031 (01-1739-1)
CURRENT APPLICATION NUMBER: US/09/965,967
CURRENT FILING DATE: 2001-09-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION: MAMMALIAN IAP GENE FAMILY, PRIMERS, TITLE OF INVENTION: PROBES, AND DETECTION METHODS FILE REFERENCE: 07891/003003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQ ID NOS: 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: 60/236,574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 22 LASAGLYYTGIGDQVQCFCCGGKLKNWEPCDRAWSEHRRHFPNCFF 67
                                                                                                                                                                                            36 LASAGLYYTGIGDQVQCFCCGGKLKNWEPCDRAWSEHRRHFPWCFF 81
                                                                                                                                                                                                                                                                                 Local Similarity 69.6 es 32; Conservative
                                                                                                                                                                                                                  1 LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/256,830
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PatentIn version 3.1
Korneluk, Robert G.
MacKenzie, Alexander E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Baird, Stephen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MacKenzie, Alexander E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
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                                                                                                                                                                                                                                                                                            68.2%;
69.6%;
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                                                                                                                                                                                                                                                                                                   Score 182; DB 9; Length 110; Pred. No. 7.6e-16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 182; DB 9; Length 68; Pred. No. 4.5e-16; Indels 1; Mismatches 13; Indels
                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                               13: Indels
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                                                                                                                                                          ; LENGTH: 497
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-201-936-4
                                                                            Ouery Match
Best Local Similarity
Matches 32; Conserv
                                                                                                                                                                                                                                      SOFTWARE: FastSEQ for Windows Version 3.0 SEQ ID NO 4
                                                                                                                                                                                                                                                                                           EARLIER APPLICATION NUMBER: 08/576,956
EARLIER FILING DATE: 1995-12-22
EARLIER APPLICATION NUMBER: 08/511,485
EARLIER FILING DATE: 1995-08-04
                                                                                                                                                                                                                                                                                                                                                                       EARLIER APPLICATION NUMBER: PCT EARLIER FILING DATE: 1996-08-05
                                                                                                                                                                                                                                                                                                                                                                                                                                 EARLIER APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT
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                                                                                                                                                                                                                                                                           NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                 EARLIER
184 LASAGLYYTGIGDQVQCFCCGGKLKNWEPCDRAWSEHRRHFPNCFF 229
                    1 LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF 46
                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 1998-02-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 1998-12-0:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: US/09/201,936
                                                                              Conservative
                                                                                              69.68;
                                                                                                                                                                                                                                                                                                                                                                                            PCT/IB96/01022
                                                                                                                                                                                                                                                                                                                                                                                                                                   09/011,356
                                                                                              Score 182; DB 9;
Pred. No. 3.9e-15;
                                                                              Mismatches
                                                                                                               Length 497;
                                                                              Indels
                                                                              0;
                                                                              Gaps
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Search completed: May 5, 2003, 16:11:06 Job time: 6.67051 secs

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RESULT 8
AAW19582
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                       Qy
                                                                                                        Query Match
Best Local
                                                   Matches
                                                                                                                                         human diagnosed as HIV-positive or as having AIRS, a neurodegenerative disease, a myelodysplastic syndrome or an ischaemic injury, seleted from myocardial infarction, stroke,
                                                                                                                                                                               The HIAP amino acid sequences were deduced from cDNA clones (AAT700 and AAT70838) from a human liver library. IAP polypeptides can be expressed in host cells (in vitro or in vivo) and used in methods for treating diseases and disorders involving apoptosis, esp. in a
                                                                                                                                                                                                                                   Human XIAP, HIAP-1 and HIAP-2 and murine M-XIAP, M-HIAP-1 and M-HIAP-2 (AAW19981-86) are a new class of mammailan proteins that are inhibitors of apoptosis (IAP) and which are characterised by the presence of a ring zinc.finger domain (see also AAW19587) and at least one BIR (baculovirus IAP repeat) domain (see also AAW19588).
                                                                                                                                                                                                                                                                                                                                             Nucleic acid encoding an inhibitor of apoptosis polypeptide - used to inhibit apoptosis in e.g. HIV or AIDS patients, and for detection of susceptibility to apoptotic disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             22-DEC-1995;
04-AUG-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Apoptosis inhibitor; HIAP-1; HIV; AIDS; neurodegeneration; myelodysplastic syndrome; ischaemia; myocardial infarction; stroke; reperfusion injury; toxin-induced liver disease; gene therapy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         02-SEP-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAW19582 standard; Protein; 604 AA.
                                                                                                                                                                                                                                                                                                                                                                                                    N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                          Baird S,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Doma in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human apoptosis inhibitor HIAP-1.
                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                       Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (UYOT-) UNIV OTTAWA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO9706255-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens.
                                                                                                                               reperfusion injury, or a toxin-induced liver disease.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Domain
 189
                         H
             LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF 46
                                                                                                                                                                                                                                                                                                                                                                                                   1997-154262/14.
DB; AAT70837.
LARAGEYYIGPGDRVACEACGGKLSNWEPKDNAMSEHLRHEPKOPE
                                                                                                                                                                                                                                                                                                                    27; Page 72-74; 219pp; English.
                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                         Korneluk RG,
                                                                                                      604 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            95US-0576956
95US-0511485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    96WO-IB01022.
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546..591
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255..322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /label=
                                                              98.9%;
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                                                  Score 264; DE
Pred. No. 3.2e
1; Mismatches
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                                                              DB 18;
.2e-25;
                                                   0
                                                                           Length 604;
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ABG65664
ID ABG65
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AAW69295
×8×
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                                                                                                                                                                                                                   Best
                                                                                                                                                             Matches
                                                                                                                                                                                      Query Match
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Tsang B;
                                                                                                                                                                                                                                        apoptosis protein (IAP), and can be used in the method of the invention. The method is for enhancing apoptosis in cells from a mammal with proliferative disease by treatment with a compound that inhibits biological activity of an IAP or NAIP polypeptide. The inhibitory compounds are used to treat proliferative diseases, specially cancers of ovary, breast, pancreas, lymph nodes, skin, blood, lung, brain, kidney, iver nasopharnyx, thyroid,central nervous system, prostate, colon, veretum, cervix or endometrium, particularly to increase their sensitivity to chemotherapeutic agents. High levels of the IAP or NAIP proteins are detected in many cancers and are associated with poor prognosis, suggested that wild-type p53 suppresses transcription of the IAP or NAIP genes). Transgenic animals are used for testing the effects of antisense oligonucleotides and for screening for the inhibitors.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Inducing apoptosis in proliferative mammalian cells with inhibitor of IAP or NAIP polypeptide - also methods for prognosis based on presence of IAP and NAIP, specifically applied to cancers involving
            ABG65664;
                                     ABG65664 standard; Protein; 604
                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Disclosure; Fig 2; 147pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            p53 mutations
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 1998-467164/40
N-PSDB; AAV55039.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               rnhibitor of apoptosis protein; apoptosis enhancer;
proliferative disease; IAP; therapy; cancer; human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human HIAP-1
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                                                                                                                                                                                                                                                                                                                                                                                                                                        This sequence is the human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (UYOT-) UNIV OTTAWA
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                                                                                                       Local
                                                                                                                                                            45; Conserv
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                                                                                                                                                                                                                 604
                                                                                                                                                             Conservative
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                                                                                                                                                                                                                   ΑĄ,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     98WO-IB00781
                                                                                                                                                                         98.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Liston P,
                                                                                                                                                                                                                                                                                                                                                                                                                                        HIAP-1 protein, which is a inhibitor of
                                                                                                                                                           Score 264; DB 19;
Pred. No. 3.2e-25;
1; Mismatches (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mackenzie AE,
                                                                                                                                                                                       19;
                                                                                                                                                             0,
                                                                                                                                                                                      Length 604;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pratt C;
                                                                                                                                                             Indels
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HIAP-1 protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ased on involving
                                                                                                                                                             0;
                                                                                                                                                             Gaps
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26-AUG-2002 (first entry)

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RESULT 11
AAU02925
ID AAU02
XX
AC AAU02
XX
AC 12-SE
XX
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Best Local S
                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                The invention relates to an inhibitor of apoptosis (IAP) antisense nucleic acid (I) that inhibits IAP biological activity, regardless of length of the antisense nucleic acid, the IAP proteins may be mouse or human XIAP, HIAP1 or HIAP2. Also included are a pharmaceutical composition comprising a mammalian IAP antisense molecule and a method of enhancing apoptosis in a cell, comprising administering a negative regulator of the IAP anti-apoptotic pathway to the cell. The IAP antisense inhibitor is useful for enhancing apoptosis in a cell in a mammal diagnosed with a proliferative disease. The method is useful for treating a patient diagnosed with a proliferative disease. The matisense molecule is useful to treat, ameliorate, improve, sustain or prevent proliferative diseases (e.g. ovarian cancer, and also in diseases or adaptorary land also in diseases or
                 12-SEP-2001
                                                                                                                                                                                                                                                                                                                                                  adenocarcinoma, lymphoma, pancreatic cancer,) and also in diseases or conditions where apoptosis is involved or implicated (e.g. embryonic development, viral pathogenesis, autoimmune disorders, neurodegenerative diseases, multiple sclerosis, lupus erythematosus and infection by herpes virus, pox virus and adenovirus). The present sequence is a human IAP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Novel antisense inhibitor of apoptosis nucleic acid useful for enhancing apoptosis in a cell, for treating cancer and other proliferative diseases .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       27-SEP-2001; 2001WO-CA01379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         04-APR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       pancreatic cancer; embryonic development; vixal pathogenesis; autoimmune disorder; neurodegenerative disease; multiple sclerosis; lupus erythematosus; herpes virus infection; pox virus infection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cytostatic; cancer; ovarian cancer; adenocarcinoma; pancreatic cancer; embryonic development; viral pati
                                                   AAU02925;
                                                                                 AAU02925 standard;
                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Disclosure; Fig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Korneluk RG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO200226968-A2
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                                                                                                                                                                    LARAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF 234
                                                                                                                                                                                                  LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFFKCPF 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            inhibitor of apoptosis, HIAP1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          antisense; inhibitor of apoptosis; HIAP1; HIAP2; XIAP;
                                                                                                                                                                                                                                        L Similarity
45; Conser
                                                                                                                                                                                                                                                                                                                                         sequence
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                                                                                                                                                                                                                                                                                                         604
                                                                                                                                                                                                                                        Conservative
               (first
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                                                                                                                                                                                                                                                                                                         A,
                                                                                   Protein;
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                                                                                                                                                                                                                                                      98.9%;
97.8%;
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                                                                                   306
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                                                                                                                                                                                                                                                      Score 264;
Pred. No. 3
                                                                                   A
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                                                                                                                                                                                                                                                      DB 23;
3.2e-25;
                                                                                                                                                                                                                                                                    Length 604;
                                                                                                                                                                                                                                      Indels
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Angiotensin converting enzyme splice variant; ACEV; interleukin 6; granulocyte colony stimulating factor receptor; glucagon; hypertrophy; platelet-derived endothelial cell growth factor; cardiovascular disease; cellular tumour antigen P53; cyclin-dependent kinase inhibitor IC; vasoactive intestinal polypeptide receptor 2; arteriosclerosis; cancer; myocardial infarction; coronary arterial thrombosis; renal disease; diabetic nephropathy; muscular disease; immune disorder; sarcoidosis; multiple sclerosis; immune complex nephritis; deep vein thrombosis;
                                                                                                Novel alternative splicing variants e.g. variant of angictensin converting enzyme (ACEV), useful in identifying candidate compounds capable of binding to the variant and to detect anti-variant antibodies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                17-NOV-1999;
10-DEC-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        nonarcoidotic pulmonary granulomatous disease; endothelial abnormality; vascular disorder; asbestosis.
Claim 4; Fig 25; 519pp; English.
                                                                                                                                                                                                                                           N-PSDB; AAS06025.
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                                                                                                                                                                                                                                                                                                                                           Levine 2,
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                                                                                                                                                                                                                                                                                                                                                                                                               (COMP-) COMPUGEN LTD
                                                                                                                                                                                                                                                                                                                                        David A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                99IL-0132978
99IL-0133455
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                                                                                                                                                                                                                                                                                                                                           Khosravi R,
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The sequence represents an angiotensin converting enzyme splice variant (ACEV) polypeptide. The polypeptides of the invention include variants of granulocyte colony stimulating factor receptor, glucagon, interleukin 6, platelet-derived endothelial cell growth factor, cyclin-dependent kinase inhibitor IC, cellular tumour antigen P53, and vasoactive intestinal polypeptide receptor 2. The polypeptides and their associated nucleic acids are useful for identification of variant sequences and detection of candidate compounds capable of binding the molecules. The sequences of the invention can be used in the treatment and diagnosis of various disorders including cardiovascular diseases such as arteriosclerosis, myocardial infarction and coronary arterial thrombosis, renal diseases such as diabetic nephropathy, muscular diseases such as hypertrophy, immune disorders such as immune complex nephritis, multiple sclerosis, cancer, sarcoidosis, nonarcoidotic pulmonary granulomatous diseases such as asbestosis and vascular pathologies involving an endothelial

Sequence 306 AA;

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                                                    Query Match
Best Local :
                                            Matches
204
                      1 LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF 46
LARAGEYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPNCPF
                                          44;
                                                      Similarity
                                           Conservative
                                                      97.0%;
                                          Score 259; DB Pred. No. 6.7e
1; Mismatches
                                          1;
                                                      259;
No. 6.
                                                      DB 22;
5.7e-25;
                                                               Length 306;
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AAW13549 PXXXX 22-JUL-1997 AAW13549; AAW13549 standard; (first entry) Protein; 46 Ą

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AAW04583
                                                                                                                                                                                                                                                  RESULT 13
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Best Local S
Matches 42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The human cellular inhibitor of apoptosis proteins (c-IAP1/2 - AAN(61590)T61591) comprise a series of defined structural domain repeats and/or a RING finger domain; in particular, at least two of a first domain repeat (AAW13547 or AAW13548), a second domain repeat (AAW13549), and a third domain repeat (AAW13551 or AAW13552) and/or a RING finger domain (AAW13553 or AAW13554), or a consensus sequences derived from these human genes.

The nucleic acid is used for recombinant prodm. of human cellular regulation. The nucleic acids are useful in therapies where increased cell-specific apoptosis is desired, (19. in restinosis, inflammatory disease states, myocardial infarction, glomerular nephritis, transplant rejection and infectious diseases, e.g. HIV.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Nucleic acids encoding cellular inhibitor of apoptosis proteins useful for apoptosis regulation in cells to reduce or increase apoptosis and for pharmacological screening
                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 3; Page 24; 35pp; English.
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08-AUG-1995;
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 WO9635703-A1
                                                                                                                       Human inhibitor of apoptosis gene
                                                                                                                                                          07-FEB-1997
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 06-AUG-1996;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IAP; inhibitor; apoptosis; RING finger domain; restinosis;
myocardial infarction; nephritis; HIV.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human
                               Homo sapiens
                                                           Inhibitor of apoptosis 1; hIAP-1; degenerative disease; rheumatoid arthritis; septic shock; antiviral; trauma; stroke; cell death; oncogenesis; cancer; diagnosis; therapy.
                                                                                                                                                                                       AAW04583;
                                                                                                                                                                                                                     AAW04583 standard;
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42; Conser
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95US-0512946.
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                                                                                                                                                                                                                     Protein; 438
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                                                                                                                                                      entry)
                                                                                                                                                                                                                                                                                                                                                                            92.9%;
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                                                                                                                                                                                                                                                                                                                                                                             Score 248;
Pred. No. 2
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                                                                                                                                                                                                                                                                                                                                                                            DB 18;
.3e-24;
                                                                                                                                                                                                                                                                                                                                                                                          Length 46;
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AAW19746
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AC
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Best Local Similarity
Matches 42; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human inhibitor of apoptosis 1 (hIAP-1) (AAW04583) is a protein useful for treating degenerative diseases, rheumatoid arthritis, septic shock, as an antiviral defence mechanism, and for preventing cell death during strokes or trauma. Its amino acid sequence was deduced from a cDNA clone (AAT43709) that can be obsequence was deduced from a cDNA clone (AAT43709)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 1; Page 40-41; 53pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Polynucleotide encoding human inhibitor of apoptosis gene 1 - usef for treating degenerative diseases, as antiviral defence mechanism and preventing cell death during trauma and strokes
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                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAW19746 standard; Protein; 618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           from human Jurkat cell lines or human osteoclastoma stromal cell lines. Recombinant hIAP-1 can be produced in prokaryotic or eukaryotic host cells, or expressed in vivo. It can also be used to screen for modulators of hIAP-1 activity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N-PSDB;
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                                                                                                                                                                                                                                                                                                                 Inhibitor of apoptosis protein; IAP; mammalian IAP homologue;
degenerative disease; infectious disease; autoimmune disease;
                                                                                                                                                                                                                                                                                                                                                             Human inhibitor
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              20-DEC-1996;
                                            03-JUL-1997.
                                                                         WO9723501-A1
                                                                                                                         Region
                                                                                                                                                                                    Region
                                                                                                                                                                                                                                   Key
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DB; AAT43709.
                                                                                                                                                                                                                                                                                             therapy;
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              96WO-AU00827
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                                                                                                                                                        /label= BIR
269..337
                                                                                                          /label= RING_finger
                                                                                                                                                                                                                                ocation/Qualifiers
                                                                                                                                                                                                                                                                                                diagnosis
                                                                                                                                        'label- BIR
                                                                                                                                                                                                      'label=
                                                                                                                                                                                                                                                                                                                                                             apoptosis
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91.3%;
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                                                                                                                           606
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Pred. No. 2.5e
2; Mismatches
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.5e-23;
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Length Indels

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RESULT 15
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Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mammalian TAP homologue B (MIHB) (AAW19746) is a human homologue of baculovirus inhibitor of apoptosis protein (IAP). Its amino acid sequence was deduced from a cDNA clone (see also AAT7271) isolated from a human foetal liver cDNA library using primers based on human EST sequences that resembled the BIR repeats of Orygia pseudotsuguta polyhedrosis virus IAP. IAP homologues (see also AAW19745 and AAW19747-52) and their derivatives and chemical analogues can be used in methods for modulating apoptosis in animal cells, specifically for treatment, by inhibition, of degenerative and infectious disease or, by promotion, of cancer and autoimmune
22-DEC-1995;
04-AUG-1995;
                                     05-AUG-1996;
                                                                                                                                                                                                                    Key
                                                                                                                                                                                                                                                                                            Apoptosis inhibitor; HIAP-2; HIV; AIDS; neurodegeneration; myelodysplastic syndrome; ischaemia; myocardia! infarction
                                                                                                                                                                                                                                                                                                                                                            02-SEP-1997
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Isolated protein homologues of viral inhibitors of apoptosis - used to modulate apoptosis for treatment of degenerative, infectious or autoimmune diseases and cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 1997-350966/32.
N-PSDB; AAT72711.
                                                              20-FEB-1997.
                                                                                                                           Domain
                                                                                                                                                                               Domain
                                                                                                                                                                                                                                                                   diagnosis.
                                                                                                                                                                                                                                                                                                                                    Human apoptosis inhibitor HIAP-2
                                                                                                                                                                                                                                                                                                                                                                                       AAW19583;
                                                                                                                                                                                                                                                                                                                                                                                                             AAW19583 standard; Protein;
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                                                                                       WO9706255-A2
                                                                                                                                                    Domain
                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                 reperfusion
                                                                                                                                                                                                        Domain
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            22-DEC-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHIPKCPF 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LARAGFYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCPF 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 Similarity
42; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              618 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                injury; toxin-induced liver disease; gene therapy;
                                                                                                                                                                                                                                                                                                                                                            (first entry)
95US-0576956.
95US-0511485.
                                     96WO-IB01022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            95AU-0007275
                                                                                                                                                                                                       Location/Qualifiers
46..113
                                                                                                             'label= Ring_zinc_finger
                                                                                                                                                                                          label= BIR-1
                                                                                                                                       label- BIR-3
                                                                                                                                                    label- BIR-2
69..336
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605
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Pred. No. 3.6e-23;
2; Mismatches 2;
                                                                                                                                                                                                                                                                                             infarction; stroke;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 618;
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Human XIAP, HIAP-1 and HIAP-2 and murine M-XIAP, M-HIAP-1 and M-HIAP-2 (AAM)9581-86) are a new class of mammalian proteins that are inhibitors of apoptosis (IAP) and which are characterised by the presence of a ring zinc finger domain (see also AAW)9587) and at least one BIR (baculovirus IAP repeat) domain (see also AAW)9588). The HIAP amino acid sequences were deduced from cDNA clones (AAT70837 and AAT70838) from a human liver library. IAP polypeptides can be expressed in host cells (in vitro or in vivo) and used in methods for treating diseases and disorders involving apoptosis, esp. in a human dispersion of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Nucleic acid encoding an inhibitor of apoptosis polypeptide - used to inhibit apoptosis in e.g. HIV or AIDS patients, and for detection of susceptibility to apoptotic disease
                                                                                                                                    human diagnosed as HIV-positive or as having AIDS, a neurodegenerative disease, a myelodysplastic syndrome or an ischaemic injury, seleted from myocardial infarction, strok
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 27; Page 75-77; 219pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Baird
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밁 Qγ Query Match
Best Local Similarity
Matches 42; Conserv 204 LARAGFYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCPF 249 1 LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF Conservative 92.9%; 91.3%; Ŋ ,, Score 248; Pred. No. 3. Mismatches DB 18; .6e-23; Indels 46 0 Gaps

Sequence repertusion

618 AA;

injury,

or a toxin-induced liver disease.

stroke,

Length 618;

0,

Search co completed: May ne : 10.0622 secs <u>ა</u> 2003, 16:02:01

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Result
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB seq length: 2000000000
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Perfect score:
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                                                                                                                                                                                                                                                                                                                                                     Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                   Score
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Gapop 10.0 , Gapext 0.5
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604
1140
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                       AAW13550
AAW19747
AAW13546
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AAY33997
AAU97837
AAU97837
AAB50694
AAW19582
AAW19582
    ABG65664
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n C-IAP2 repea n inhibitor of n c-IAP2. Hom n cellular inh n cellular inh n cellular inh n cellular chi n apptosis in apoptosis in n HIAP-1 prote n inhibitor of
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Drosophila melanog Drosophila nelanog Gorilla IAP-like p Protein of APP red Neuronal apoptosis	ABB62863 AAE00367 AAO20511 AAR98217	22 23 17	498 236 278	4 2 4 6	145 144 141
Human TIAP (an inh Human TIAP (an inh Human IAP-like pro Chimpanzee IAP-lik Human testes speci Drosophila inhibit	AAV81440 AAV81440 AAE00365 AAE00366 AAU75066 AAW19748 ABB63863	2222222	> 4 2 2 2 2 4 2 2 3 3 3 4 2 3 3 5 6 6 6	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	145 145 145
0	AAW69294 AAY99985 AAY59451 ABC65663 AAU75747 AAW19745 AAW19745 AAW19584	198 231 21 21 21 21 21 21 21 21 21 21 21 21 21	44444 44044 4000777	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	182 182 182 182 177 177
0 0	AAW69299 AAW19586 ABG65668 AAW69298 AAW19585 ABG65667	19 18 23	591 591 600 602	00001121	235 235 235 235
Angiotensin conver Human c-IAP1 repea Human inhibitor of Human inhibitor of Human apoptosis in Human apoptosis in Human Human C-IAP1. Hom Human cellular inh Human inhibitor of Murine C-IAP. Mus	AAU02925 AAW13549 AAW04583 AAW19746 AAW19583 AAW115545 AAW115545 AAW135998 AAW13565	122 118 118 120 123	306 466 618 618 618 618	9922992	22222222222222222222222222222222222222

ALIGNMENTS

RESULT 1
AAW13550
ID AAW1

AAW13550 standard;

Protein;

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Ld	PT	PT	XX	DR	XX	ΡI	×	PA	××	P,R	PR	XX	Āđ	XX	PD	××	PN	××	SO	XX	KW	Χ¥	XX	DE	xx	ΡŢ	XX	AC	XX	•
apoptosis and for pharmacological screening	useful for apoptosis regulation in cells to reduce or increase	Nucleic acids encoding cellular inhibitor of apoptosis proteins		WPI; 1997-154209/14.		Goeddel DV, Rothe M;		(TULA-) TULARIK INC.	Company	08-AUG-1995;	08-DEC-1995; 950S-0569749.		06-AUG-1996; 96WO-US12860.		20-FEB-1997.		W09706182-A1.		Homo sapiens.		myocardial infarction; nephritis; HIV.	IAP; inhibitor; apoptosis; RING finger domain; restinosis;		Human c-IAP2 repeat 2.		22-JUL-1997 (first entry)		AAW13550;		***************************************

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RESULT 2
AAW19747
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Best Local S
Matches 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeats and/or a RING finger domain; in particular, at least two of a first domain repeat (AAW1354) or AAW13550), and a third domain repeat (AAW13550) and/or a RING finger domain (AAW1353 or AAW13551 or AAW13552) and/or a RING finger domain (AAW1353 or AAW13554), or a consensus sequences derived from these human genes.

The nucleic acid is used for recombinant procin. of human cellular inhibitor of apoptosis protein which modulates apoptosis regulation. The nucleic acids are useful in therapies where increased cell-specific apoptosis is desired, e.g. in restinosis, inflammatory disease states, myocardial infarction, glomerular nephritis, transplant rejection and infectious diseases, e.g. HIV.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAW19747 standard;
Isolated protein homologues of viral inhibitors of apoptosis - to modulate apoptosis for treatment of degenerative, infectious
                                  WPI; 1997-350966/32
N-PSDB; AAT72712.
                                                                                                                                                                  03-JUL-1997
                                                                                                                                                                                                                                                                                                                                                            cancer; therapy; diagnosis.
                                                                                                                                                                                                                                                                                                                                                                      Inhibitor of apoptosis protein; IAP; mammalian IAP homologue; MIHC; degenerative disease; infectious disease; autoimmune disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                        Vaux DL;
                                                                                                                    22-DEC-1995;
                                                                                                                                            20-DEC-1996;
                                                                                                                                                                                           WO9723501-A1
                                                                                                                                                                                                                             Region
                                                                                                                                                                                                                                                   Region
                                                                                                                                                                                                                                                                           Region
                                                                                                                                                                                                                                                                                                               Key
                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                          Human inhibitor of apoptosis
                                                                                                                                                                                                                                                                                                                                                                                                                                    16-SEP-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAW19747;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The human cellular inhibitor of apoptosis proteins (c-IAP1/2 - AAT61590/T61591) comprise a series of defined structural domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 3; Page 24; 35pp;
                                                                                              (AMRA-) AMRAD
                                                                                                                                                                                                                                                                                                   Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
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                                                                                              OPERATIONS PTY LTD.
                                                                                                                   95AU-0007275
                                                                                                                                           96WO-AU00827
                                                                                                                                                                                                                            556.
                                                                                                                                                                                                                                                 /label- BIR
255..323
                                                                                                                                                                                                                                                                                                   Location/Qualifiers 29..97
                                                                                                                                                                                                                                        /label= BIR
                                                                                                                                                                                                                                                                            69..
                                                                                                                                                                                                                                                                                       'label≔ BIR
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Protein; 604
                                                                                                                                                                                                                              593
                                                                                                                                                                                                                                                                           236
                                                                                                                                                                                                                  RING_finger
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                         protein homologue MIHC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 267; DB 18;
Pred. No. 8.5e-27;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             46;
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RESULT 3
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Best Local Similarity
Matches 46; Conser
sequences derived from these human genes:
The nucleic acid is used for recombinant prodn.
inhibitor of apoptosis protein which modulates a
                                         The human cellular inhibitor of apoptosis proteins (c-IAP1/2 - AAT6.590/T6.591) comprise a series of defined structural domain repeats and/or a RING finger domain; in particular, at least two of a first domain repeat (AAW13547 or AAW13548), a second domain repeat (AAW13549), and a third domain repeat (AAW13551 or AAW13552) and/or a RING finger domain (AAW13553 or AAW13554), or a consensus
                                                                                                                                                                                  Nucleic acids encoding cellular inhibitor of apoptosis proteins useful for apoptosis regulation in cells to reduce or increase apoptosis and for pharmacological screening
                                                                                                                                                                                                                                                                                                                                                           08-DEC-1995;
08-AUG-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IAP; inhibitor; apoptosis; RING finger myocardial infarction; nephritis; HIV.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              baculovirus inhibitor of apoptosis protein (IAP). Its amino acid sequence was deduced from a cDNA clone (see also AAR72712) isolated from a human foetal liver cDNA library using primers based on human EST sequences that resembled the BIR repeats of Orygia pseudotsuguta polyhedrosis virus IAP. IAP homologues (see also AAW19745-46 and AAW19748-52) and their derivatives and chemical analogues can be used in methods for modulating apoptosis : animal cells, specifically for treatment, by inhibition, of degenerative and infectious disease or, by promotion, of cancer and autoimmune
                                                                                                                                                        Disclosure; Page 21-23; 35pp; English.
                                                                                                                                                                                                                                                  WPI; 1997-154209/14.
N-PSDB; AAT61591.
                                                                                                                                                                                                                                                                                               Goeddel DV,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO9706182-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human c-IAP2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAW13546 standard; Protein; 604 AA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       autoimmune diseases and cancer
                                                                                                                                                                                                                                                                                                                                                                                                        06-AUG-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                            (TULA-) TULARIK INC
                                                                                                                                                                                                                                                                                                                                                                                                                                       20-FEB-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           22-JUL-1997
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mammalian IAP homologue C (MIHC) (AAW19747) is a human homologue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF
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                                                                                                                                                                                                                                                                                               Rothe
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95US-0512946
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                 of human
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RESULT 4
AAY52703
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A method has been developed of defining a set of compounds that modulate the expression of a target nucleic acid (tNA) sequence via binding of the compounds with the tNA sequence. The method comprises generating a collibrary of virtual compounds in silico according to defined criteria. CC and evaluating in silico the binding of the virtual compounds with the tNA according to defined criteria. Also described are: (1) a method of CC defining a set of oligonucleotides (ONs) that modulate the expression of CC a tNA sequence via binding of the ONs with the tNA sequence comprising CC generating a library of virtual compounds in silico according to defined CC criteria, and evaluating in silico the binding of the virtual ONs with the tNA according to defined criteria; and (2) a method of defining a CC set of compounds that modulate the expression of a tNA sequence via binding of the compounds with the tNA. The method of defining a CC binding of the compounds with the tNA. The method can be used for the CC generation and identification of synthetic compounds having defined CC physical, chemical or bloactive properties. Information gathered from assays of such compounds is used to identify nucleic acid sequences that
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
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Best Local
                                                                                                                                                                                                                                                                                                 Identifying compounds which modulate to provide compounds having defined properties, e.g. antisense activity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           inflammatory disease states, nephritis, transplant rejecti
They can also be used in conc
                                                                                                                                                                                                                                                                                                                                                                                                                          Cowsert LM,
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28-APR-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          nucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        antisense oligonucleotide;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      regulation. The nucleic acids are useful in increased cell-specific apoptosis is desired.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        189 LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHIPKCPF 234
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DB; AAZ41005.
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                                                                                                                                                                                                                                                                                                                                                                                                            Wyatt JR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sequence-based
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  604 AA;
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llarity 100.0%;
Conservative
                                                                                                                                                                                                                                                                       Page 197-202;
                                                                                                                                                                                                                                                                                                                                                                                                                            Baker
                                                                                                                                                                                                                                                                                                                                                                                                                                                         PHARM INC
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98US-0067638
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                                                                                                                                                                                                                                                                                                                                                                                                         McNeil J,
rchers AH,
                                                                                                                                                                                                                                                                  264pp;
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technology; antisense drug discovery.
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; Mismatches
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                                                                                                                                                                                                                                                                      English.
                                                                                                                                                                                                                                                                                                                                                                                                            Freier SM,
Vickers TA;
                                                                                                                                                                                                                                                                                                          e expression of nucleic acids, us
physical, chemical or bloactive
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RESULT 6 AAU97837

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Conservative

LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF

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Matches 46
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      are tractable to a variety of nucleotide sequence-based technologies, e.g. antisense drug discovery and target validation. AAZ40852 to AAZ41220, and AAZ52701 to AAZ52706, represent sequences used in the
                                                                                                                                                                                    as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    03-DEC-1998;
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                                                                                               Sequence
                                                                                                                                                                                                                             The invention provides antisense compounds of 8-30 nucleotides the inhibit the expression of human Cellular Inhibitor of Apoptosis-2 (C-IAP-2). The antisense compounds may be used for diagnostics, therapeutics (for modulating the expression of C-IAP-2), prophylax the expression of C-IAP-2), prophylax the expression of C-IAP-2 (C-IAP-2), prophylax the expression of C-IAP-2).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N-PSDB;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bennett CF,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAY33997
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                                                                                                                                                              (e.g. to prevent or delay infection, inflammation, or tumor formation), as research reagents (e.g. to distinguish between members of a biological pathway) and in kits. The present sequence represents the human cellular
                                                                                                                                                                                                                                                                                                                                                                                                     useful
                                                                                                                                                                                                                                                                                                                                                                                                                         Antisense
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                                                                                                                                                                                                                                                                                                                                                     Example 13;
                                                                                                                                               inhibitor
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  1 Similarity
46; Conser
                                                                                                                                                                                                                                                                                                                                                                                                 for e.g. diagnostics,
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                                                                                                                                                                                                                                                                                                                                                                                                                       compounds complementary to Cellular Inhibitor
                                                                                                                                          of apoptosis-2.
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Conservative
                                                                                                                                                                                                                                                                                                                                                       Columns 45-50;
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                                                                                                                                                                                                                                                                                                                                                       33pp;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     604
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    0
                                                                                                                                                                                                                                                                                                                                                                                                   therapeutics,
  Score 267; D
Pred. No. 1.3
); Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 267;
Pred. No. 1
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                                                                                                                                                                                                                                                                                                                                                       English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        inflammation;
                        267; DB
No. 1.3e-
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 20;
L.3e-25;
es 0;
                                                                                                                                                                                                                                                                                                                                                                                                     and
    -25;
0;
                                                                                                                                                                                                                                                                                                                                                                                                     as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tumor formation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 diagnostic; therapeutic;
                                                                                                                                                                                                                                                                                                                                                                                                   hibitor of research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
       Indels
                                                   Length
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                                                                                                                                                                                                                                     prophylaxis
                                                                                                                                                                                                                                                                                                                                                                                                        reagents
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       Gaps
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0;

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This sequence represents a polypeptide (I) termed BAR83099.1 (CPG1), CC AAD46161.1 (CPG2) or AAD38507.2 (CPG3), identified as a cysteine cyprotease, its fragment having cysteine protease activity or having an CC antigenic determinant in common with the polypeptide, or its functional cequivalent. (I) is useful as a cysteine protease and for effecting CC cell-cell adhesion. A nucleic acid (II) encoding (I) is useful for CC expressing a protein that possesses cysteine protease activity. (I), CC (II), a vector (III) comprising (II), a ligand (IV) which binds (I) and compound (V) that alters the activity of (I), are useful for treating CC diseases in which the expression of the natural gene or the activity of the polypeptide is higher or lower in a disease patient when compared CC to the level of expression or activity in a healthy patient. (I) - (X) CC are useful in therapy or diagnosis of disease and in the manufacture of a medicament for treating lymphoma, rheumatoid arthritis, osteoporosis, inflammatory disease, such as irritable bowel disease, respiratory CC disease such as asthma, autoimmune disease, such as melanoma, prostate, lung atheret disease, mycardial infarction, cardiac failure, reperfusion CC parkinson's disease, neurological disorder, stroke, muscular dystrophy, CC parkinson's disease, cataract, infection such as Alzhelmer's disease, Cataract, infection such as Balzhelmer's disease, CC parkinson's disease, cataract, infection such as balzhelmer's disease, cataract, infection as compound effective to treat a disease. This sequence encodes cystiene proteins fusion protein
   Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Cystiene protease; CPG2; cell-cell adhesion; lymphoma; osteoporosis; rheumatoid arthritts; inflammatory disease; irritable bowel disease; respiratory disease; asthma; autoimmune disease; bone disease; atherosclerosis; neoplastic disease; melanoma; prostate; lung tumou; ovary tumour; myeloproliferative disease; melanoma; netastasis; heart disease; myocardial infarction; cardiac; fallure; hP12-MLT; reperfusion injury; neurodegenerative disease; Alzheimer's disease; parkinson's disease; neurological disorder; stroke; muscular dystroparkinson's disease; neurological disorder; stroke; muscular disease; neurological disorder; stroke; mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New proteins identified as cysteine proteases for diagnosing, preventing and treating neoplastic, inflammatcry, autoimmune diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20-OCT-2000; 2000GB-0025816
29-JAN-2001; 2001GB-0002260
                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 1; Fig 15; 129pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Fagan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (INPH-) INPHARMATICA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             22-OCT-2001; 2001WO-GB04698
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               25-APR-2002
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      neurological disorders
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2002-463311/49
)B; ABK52387.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cystiene protease fusion protein AP12-MLT (CPG2).
                                                                                           1140
                                                                                           Å
                                                                                                                                                       described
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Protein; 1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       entry)
   100.0%;
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                                                                                                                                                       ä
   Score
Pred.
                                                                                                                                                    cystiene protease invention.
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267; DB 23;
No. 2.6e-25;
                               Length 1140;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             lung tumour;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ds
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189

LAKAGFYY IGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF

Query Match Best Local S Matches 46

ch 100.0%; l Similarity 100.0%; 46; Conservative

0;

Score 267; DB 22; Pred. No. 2.6e-25; Mismatches 0;

Indels Length

Gaps

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1141; 0

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AAB50694
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT
                         The present invention describes a method for determining if a tissue sample comprises a cell with a chromosome (11:18) translocation associated with malignancies such as mucosa-associated lymphoid tissue (MALT) lymphomas. The method comprises subjecting a sample nucleic acid to amplification using primers complementary to sequences which are on chromosome 11 region q21-22.3 and on chromosome 18 region q21.1-22. The method can be used for determining if a tissue sample or analogue comprises a chromosome (11:18) translocation associated with malignancies such as mucosa-associated lymphoid tissue lymphomas. The nucleic acid or the antibody may be used as a probe for detection, for hybridisation to southern blot cell DNAs or for in situ hybridisation of cells, or for determining the presence of complementary DNA. The present sequence represents the specifically claimed chimeric human apoptosis inhibitor 2 (API2)/MALT-lymphoma associated translocation (MLT) protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                          Determining if a tissue sample has a chromosome (11:18) translocation associated with malignancies by amplifying a nucleic acid sample using primers complementary to chromosome 11 region q21-22.3 and chromosome 18 region q21.1-22 -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             mucosa-associated lymphoid tissue lymphoma associated transle
chromosome 11 region q21-22.3; chromosome 18 region q21.1-22;
Sequence
                                                                                                                                                                                                                                                                                Claim 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                Baens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200073500-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Chimeric -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              molecular characterisation; chromosome translocation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human API2-MLT chimeric protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAB50694;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAB50694 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (VLAA-) VLAAMS INTERUNIVERSITAIR INST BIOTECHNOG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               27-MAY-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              26-MAY-2000; 2000WO-EP04796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               07-DEC-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tusion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               19-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF 46
                                                                                                                                                                                                                                                                                                                                                                                                             2001-061556/07.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF
                                                                                                                                                                                                                                                                                                                                                                                                                                                ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein; malignancy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              API2-MLT chimera; chimeric; apoptosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             46;
                                                                                                                                                                                                                                                                                                                                                                                                                                            Marynen P,
                                                                                                                                                                                                                                                                              Fig 5; 47pp;
 1141 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                Dierlamm
                                                                                                                                                                                                                                                                              English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               carcinogenesis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                translocation;
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OM protein - protein search, using sw model
                                                                Run on:
May 5, 2003, 15:51:32; Search time 1.90783 Seconds (without alignments) 1000.040 Million cell updates/sec
                                                                                                                                                                              GenCore version 5.1.4_p5_4578 Copyright (c) 1993 - 2003 Compugen Ltd.
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Title: Perfect score: Sequence: US-08-569-749-8 267

1 LAKAGFYYIGPGDRVACFAC.....WEPKDNAMSEHLRHFPKCPF 46

Scoring table:

BLOSUM62 Gapop 10.0 , Gapext 0.5

Total number of hits satisfying chosen parameters: 112892 seqs, 41476328 residues

112892

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database : SwissProt_40:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

ŭ	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	œ	7	0	ъ	4	ω	2	۲	Result No.
Ģ.	72.5	ø	92.5	93	103	105.5	105.5	112	121	122.5	129	131	135	138	141	141	141	141	141	144	145	145	145	175	177	182	186	235	247	248	254	267	Score
26.0	٠	ω			8	9.	9	۲.	5	5	8	9		٠.	۲	۶	2	Ν.	۲.	Ψ	4.	٠.		5	ς,	8	9	8	٢	92.9	ŗ		Query Match
224	224	275	142	286	997	142	140	239	298	4829	438	275	268	1447	1403	1403	1403	1403	1402	236	498	236	236	496	496	497	611	600	612	618	358	604	Length
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IAPL_ASFM1	IAPL_ASFB7	IAP1_NPVOP	BIR5_HUMAN	IAP1_NPVAC	BIR1_SCHPO	BIR5_RAT	BIR5_MOUSE	2FP_IRV6	BIR7_HUMAN	BIR6_HUMAN	IAP1_DROME	IAP_GVCP	IAP3_NPVOP	BIRB_MOUSE	BIRF_MOUSE	BIRE_MOUSE	BIRA_MOUSE	BIR1_HUMAN	BIRG_MOUSE	BIR8_GORGO	IAP2_DROME	BIR8_PANTR	BIR8_HUMAN	BIR4_RAT	BIR4_MOUSE	BIR4_HUMAN	BIR_CHICK	BIR2_MOUSE	BIR3_MOUSE	IR	PIAP_PIG	BIR2_HUMAN	ID
Oll452 african swi	Q65138 african swi	_				ratt		P47732 chilo iride	homo	Q9nr09 homo sapien	Q24306 drosophila	P41436 cydia pomon	P41437 orgyia pseu	Snm	Bum	Rus	mus n	hon			Q24307 drosophila		ω	ratt	mus :	0 Yom	qall	mus	mus n	Q13490 homo sapien		homo	Description

45	44	43	42	41	40	39	38	37	36	35	34
54	54	55	56	56.5	56.5	57.5	59.5	60	66.5	66.5	66.5
20.2	20.2	20.6	21.0	21.2	21.2	21.5	22.3	22.5	24.9	24.9	24.9
606	181	1433	1004	2236	706	278	404	249	238	224	224
1	_	_	_	-	ш	Н	H	Н	1	۲	H
WDR1_HUMAN	VG79_HSVI1	CAT8_YEAST	AT1B_ARTSF	PYR1_DROME	SM2A_DROME	HUPJ_RHOCA	FPRA_METTM	IAP2_NPVAC	IAPL_ASFM2	IAPL_ASFCH	IAPL_ASFC3
	Q00148 ictalurid						Q50497 methanobact				

ALIGNMENTS

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Query Match
Best Local S
Matches 46
                                                                                                                                                                                                                                                                                                                                      Pfam; PF00097; zf-C3HC4; 1
Pfam; PF00619; CARD; 1.
Pfam; PF00653; BIR; 3.
SMART; SM0023B; BIR; 3.
SMART; SM00114; CARD; 1.
SMART; SM00184; RING; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL; L49432; AAC41943.1; -. EMBL; U45878; AAC50371.1; -. EMBL; U37546; AAC50507.1; -. EMBL; AF070674; AAC83232.1; -. EMBL; AF178945; AAG09369.1; -. HSSP; Q13490; 1QBH.
                                                  CONFLICT
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SITE
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PROSITE;
                                                                                                                                                                                                                                                                                                               PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         modified and this statement is not removed. entities requires a license agreement (See or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u>:</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                B-cell lymphomas of MALT type.";
Genes Chromosomes Cancer 29:281-291(2000)
-!- FUNCTION: APOPTOTIC SUPPRESSOR. THE B
                                                                                                                                                                                                                                                                                                                                                                                                                                                           MIM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               the European Bioinformatics Institute. The by non-profit institutions as long
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                                                                                                                                                                                                            DOMAIN
                                                                                                                                                                                                                        REPEAT
                                                                                                                                                                                                                                                Apoptosis;
REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Genew;
                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FUNCTION: APOPTOTIC SUPPRESSOR. THE BIR MOTIFS REGION INTERACTS WITH THE RECEPTOR ASSOCIATED FACTORS 1 AND 2 (TRAF1 AND TRAF2) TO FORM AN HETEROMERIC COMPLEX, WHICH IS THEN RECRUITED TO THE TUMOR NECROSIS FACTOR RECEPTOR 2 (TNFR2).

SUBUNIT: Interacts with SMAC and with PR:S25; these interactions inhibit apoptotic suppressor activity.

SUBURIT: Interacts with SMAC and with PR:S25; these interactions inhibit apoptotic suppressor activity.

SUBURIT: Suppressor activity.

SUBURIT: Suppressor activity.

SUBURIT: Suppressor activity.

TISSUE SPECIFICITY: HIGHLY EXPRESSED IN FETAL LUNG, AND KIDNEY. IN THE ADULT, EXPRESSION IS MAINLY SEEN IN LYMPHOID TISSUES, INCLUDING SPLEEN, THYMUS AND PERIPHERAL HLOOD LYMPHOCYTES.

DISEASE: Involved in a till:18)(921:921) chromosomal translocation recurrent in low-grade MALT lymphoma (Mucosa-associated lymphoid tissue). This translocation is found in approximately 50% of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SIMILARITY: BELONGS TO THE IAP FAMILY.
SIMILARITY: CONTAINS 3 BIR REPEATS.
SIMILARITY: CONTAINS 1 CARD DOMAIN.
SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
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                                                                                                                                                                                                                                                                     3; PS01282; BIR_REPEAT_1; 3.
2; PS50143; BIR_REPEAT_2; 3.
2; PS50209; CARD; 1.
3; PS50209; ZF_RING_1; FALSE_1
4; PS50089; ZF_RING_2; 1.
4; PS50089; ZF_RING_2; 1.
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              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                 IPR001370; BIR.
IPR001315; CARD.
IPR001841; Znf_ring.
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29 96
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N -> E (IN R
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A -> P (IN R
K -> R (IN R
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BIR 2.
BIR 3.
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Score 267; DB 1;
Pred. No. 5.7e-27;
; Mismatches 0;
                                                    8581A00BA9AAB4A7
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ng as its content
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Best Local :
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InterPro; IPR001315; CARD:
InterPro; IPR001841; Znf_ring.
InterPro; IPR001841; Znf_ring.
Pfam; PF00097; zf-G3HC4; 1.
Pfam; PF00619; CARD; 1.
Pfam; PF00653; BIR; 2.
SMART; SM0014; CARD; 1.
SMART; SM00184; RING; 1.
SMART; SM00184; RING; 1.
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062640;
15-DEC-1998
15-DEC-1998
16-OCT-2001
                                                                                                                                                                           DOMAIN
ZN_FING
SEQUENCE
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Stehlik C., de Martin R., Binder B.R., Lipp J.;
"Cytokine induced expression of porcine inhibitor of protein (iap) family member is regulated by NF kappa Biochem. Biophys. Res. Commun. 243:827-832(1998).
-- SIMILARITY: BELONGS TO THE IAP FAMILY.
-- SIMILARITY: CONTAINS 1 DEPEATS.
-- SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
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Eukaryota; Metazoa;
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REPEAT
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NCBI_TaxID=9823;
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                   1 LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF
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20089; ZF_RI.
2 Zinc-finger; K.
4 70
90 157
93 283
C.
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PS50143; BIR_REPEAT_2;
PS50209; CARD; 1.
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BIR 2.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDILINE-96209843; PubMed-8643514;
Uren A.G., Pakusch M., Hawkins C.J.,
"Cloning and expression of apoptosis
function to inhibit apoptosis and/or
receptor-associated factors.";
Proc. Natl. Acad. Sci. U.S.A. 93:4974
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Nature 379:349-353(1996).
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Rothe M., Pan M.-G., Henzel W.J., Ayres T.M., Goeddel D.V.;
"The TNFR2-TRAF signaling complex contains two novel proteins to baculoviral inhibitor of apoptosis proteins.";
[21] 83:1243-1252(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE-99332054; PubMed-10404221;
Hinds M.G., Norton R.S., Vaux D.L.
"Solution structure of a baculovir
                                                            between
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                                                               LEUKOCYTES.

SIMILARITY: CONTAINS 3 BIR REPEATS.

SIMILARITY: CONTAINS 3 BIR REPEATS.

SIMILARITY: CONTAINS 1 CARD DOMAIN.

SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.

SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.

DATABASE: NAME-Atlas Genet. Cytogenet. Oncol. Haematol.;

WWW-"http://www.infoblogen.fi/services/chromcancer/Genes/BIRC3ID239.html".

WWW-"http://www.infoblogen.fi/services/chromcancer/Genes/BIRC3ID239.html".
                                                                                                                                                                                                                                                                                                                                       FUNCTION: APOPPOTIC SUPPRESSOR. THE BIR MOTITS REGION INTERA WITH THE RECEPTOR ASSOCIATED FACTORS 1 AND 2 (TRAFI AND TRAFF FORM AN HETEROMERIC COMPLEX, WHICH IS THEN RECRUITED TO THE NECROSIS FACTOR RECEPTOR 2 (TNFR2).

SUBUNIT: Interacts with SMAC and with PRSS25; these interact inhibit apoptotic suppressor activity.

SUBCELLULAR LOCATION: Cytoplasmic (Potential).

TISSUE SPECIFICITY: PRESENT IN MANY FETAL AND ADULT TISSUES.

MAINLY EXPRESSS, LOW OR ABSENT IN BRAIN AND PERIPHERAL BLOOD TRIVELY.
   European Bioinformatics Institute. The by non-profit institutions as long
                                                SWISS-PROT entry is copyright. It is produced through a collaboration sen the Swiss Institute of Bioinformatics and the EMBL outstation.
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baculoviral inh
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inhibitor of apoptosis
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inhibitory protein homolog
bind tumor necrosis factor
There are no restrictions ng as its content is in
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BIR3_MOUSE
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Best Local
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SMART; SM00238; BIR; 3.

SMART; SM00114; CARD; 1.

SMART; SM00114; RING; 1.

SMART; SM00184; RING; 1.

SMART; SM00184; RING; 1.

SMART; SM00184; BIR_REPEAT_1; 3

PROSITE; PS50129; CARD; 1.

PROSITE; PS50089; ZF_RING_1; FALS:

PROSITE; PS50089; ZF_RING_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ZN_FING
CONFLICT
CONFLICT
CONFLICT
CONFLICT
SEQUENCE
[2]
SEQUENCE FROM N.A.
SISQUE-Skeletal muscle;
MEDLINE-98110590; PubMed-9441758;
MEDLINE-98110590; PubMed-9441758;
MEDLINE-98110590; PubMed-9441758;
MEDLINE-98110590; PubMed-9441758;
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MEDLINE-98110590; PubMed-9941759;
MEDLINE-98110590; PubMed-9941759;
MEDLINE-99417590; PubMed-9941759;
MEDLINE-98110590; PubMed-99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BIR3_MOUSE STANDARD; PRT; 612 AA (62210; 008864; 01-NOV-1997 (Rel. 35, Created) 01-NOV-1997 (Rel. 35, Last sequence update) 15-JUN-2002 (Rel. 41, Last annotation updat Baculoviral IAP repeat—containing protein 3
                                                                                                                                                                                     SEQUENCE FROM N.A., AND PARTIAL SEQUENCE.
MEDLINE=96128127; Pubmed=8548810;
Rothe M., Pan M.-G., Henzel W.J., Ayres T.M., G
"The TNFR2-TRAF signaling complex contains two
to baculoviral inhibitor of apoptosis proteins.
Cell 83:1243-1252(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pfam; PF00097; zf-C3HC4; Pfam; PF00619; CARD; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL; L49431; AAC41942.1; -. EMBL; U45879; AAC50372.1; -. EMBL; U37547; AAC50508.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             modified and this statement is not removentities requires a license agreement (S or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota;
Mammalia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             protein 2) (MIAP2) (MI
BIRC3 OR API2 OR IAP2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=10090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Apoptosis;
REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MIM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Genew;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 [nterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               204 LARAGFYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCPF 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1QBH; 20-O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HGNC:590; BIRC2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity 91...
42; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                   Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IPR001370; BIR.
IPR001315; CARD.
IPR001841; Znf_ring.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ą
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (MIAP-2).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               250
250
336
543
543
606
157
157
308
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Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   69899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         92.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Repeat;
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BIR 3.
CARD.
RING-TYPE.
S -> P (IN REF. 2).
C -> G (IN REF. 2).
C -> W (IN REF. 2).
L -> W (IN REF. 2).
L -> W (IN REF. 2).
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                  the m
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Pred.
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                                                                                                                                                                                                                                                                                                                                                                                                                                   Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3D-structure
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                  mouse inhibitor of apopt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         protein 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         248;
No. 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     update)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 1;
.7e-24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ₹
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                                                                                                                                                                                                                                                                                            Goedde1
                                                                                                                                                                                                                              novel.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                  apoptosis
                                                                                                                                                                                                                                                          proteins related
                                                                                                                                                                                                                                                                                            D.V.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        618;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         apoptosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
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                     protein
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.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
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RESULT 5
BIR2_MOUS
    Q
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                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local S
Matches 42
                             008863;
01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Baculoviral IAP repeat-containing protein 2 (
protein 1) (MIAP1) (MIAP-1).
BIRC2 OR APII OR IAPI
Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pfam; PF00619; CARD; 1.
Pfam; PF00653; BIR; 3.
SMART; SM00238; BIR; 3.
SMART; SM00114; CARD; 1.
SMART; SM00184; RING; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -I- FUNCTION: APOPTOTIC SUPPRESSOR. THE BIR MOTIFS REGION INTERACTS WITH THE RECEPTOR ASSOCIATED FACTORS 1 AND 2 (TRAF1 AND TRAF2) TO FORM AN HETEROMERIC COMPLEX, WHICH IS THEN RECRUITED TO THE TUMOR NECROSIS FACTOR RECEPTOR 2 (TNFR2).
-I- SUBUNIT: Interacts with SMAC and with PR3S25; these interactions inhibit apoptotic suppressor activity (By similarity).
-I- SUBCELIULAR LOCATION: Cytoplasmic (Potential).
-I- TISSUE SPECIFICITY: EXPRESSED IN HEART, IRAIN, SPLEEN, LUNG, LIVER, SKELETAL MUSCLE, KIDNEY, AND TESTNS.
-I- SIMILARITY: CONTAINS 3 BIR REPEATS.
-I- SIMILARITY: CONTAINS 1 CARD DOMAIN.
-I- SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
                                                                                                                                                                                                                                                            MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ZN_FING
CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REPEAT
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Apoptosis;
REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MGD; MGI:1197009; Birc3.
InterPro; IPR001370; BIR.
InterPro; IPR001315; CARD.
InterPro; IPR001841; Znf_ring.
Pfam; PF00097; zf-C3HC4; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the Extra the European Bioinformatics Institute. There are no restructed by non-profit institutions as long as its content modified and this statement is not removed. Usage by an entitles requires a license agreement (See http://www.isb-sentitles.com/discourses/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/sections/s
                                                                                                                                                                                                                                 BIR2_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HSSP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL; L49433; AAC42078.1; -. EMBL; U88909; AAC53532.1; -.
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Genomics 46:495-503(1997)
                     Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PROSITE;
                                                                                                                                                                                                                                                                                                                                                      197
                                                                                                                                                                                                                                                                                                                                                                          1 LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                 LARAGFYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPHCPF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q13490;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PS50209; CARD; 1.
PS00518; ZF_RING_1; FALSE_NEG
PS50089; ZF_RING_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PS01282; BIR_REPEAT_1;
PS50143; BIR_REPEAT_2;
  ; Metazoa; Chordata;
Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; Zinc-finger; Repeat

16 113 BIR

17 243 BIR

262 329 BIR

447 537 CAR

565 600 RIN

380 380 E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        612
                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1QBH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ā,
                                                                                                                                                                                                                                    STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        69676 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 92.5%;
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BIR 2.
BIR 3.
BIR 3.
CARD.
RINGTYPE.
RINGTYPE.
E -> K (IN REF. 2).
W; E08969D93C6C610D CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                           2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 247; DB 1;
Pred. No. 2.2e-24;
Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                    PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                             tion update)
protein 2 (Inhibitor of apoptosis
                                                                                                                                                                                                                                 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          noved. Usage by and for commercial
(See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                 A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 612;
                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
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SEED DE LAC

BIR_CHICK STANDARD; PRT; 611 AA. 090660; 01-NOV-1997 (Rel. 35, Last sequence update) 16-OCT-2001 (Rel. 40, Last annotation update) 1nhibitor of apoptosis protein (IAP) (Inhibitor

of T

cell

apoptosis

protein). ITA. RESULT 6
BIR_CHICK

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SARARARA SARARARA SARARARA SARARARA SARARARA SARARARA SARARARA SARARARA SARARARA SARARARA SARARARA SARARARA SARARARA SARARARA SARARARA SARARARA SARARARA SARARARA SARARARA SARARARA SARARARA SARARARA SARARARA SARARARA SARARARA SARARARA SARARARA SARARARA SARARARA SARARARA SARARARA SARARARA SARARARA SARARARA SARARARA SARARARA SARARARA SARARARA SARARARA SARARARA SARARARA SARARARA SARARARA SARARARA SARARARA SARARARA SARARARA SARARARA SARARARA SARARARA SARARARA SARARARA SARARARA SARARARA SARARARA SARARARA SARARARA SARARA SARARA SARARA SARARA SARARA SARARA SARARA SARARA SARARARA SARARA 
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Best Local Similarity
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MGD; MGI:1197007; Birc2.

InterPro; IPR001370; BIR.

InterPro; IPR001315; CARD.

InterPro; IPR001841; Znf_ring.

Pfam; PF00097; Zf-G3HC4; 1.

Pfam; PF00619; CARD; 1.

Pfam; PF00619; CARD; 1.

Pfam; PF00653; BIR; 3.

SMART; SM00218; BIR; 3.

SMART; SM00114; CARD; 1.

SMART; SM00184; RING; 1.

SMART; SM00184; RING; 1.

SMART; SM00184; RING; 1.

SMART; SM00184; RING; 1.

PROSITE; PS01282; BIR_REPEAT_1;

PROSITE; PS01282; BIR_REPEAT_1;

PROSITE; PS01283; BIR_REPEAT_2;
                                                                                                                                                                                                                                                                                            DOMAIN
ZN_FING
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                             Apoptosis;
REPEAT
REPEAT
REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -I- FUNCTION: APOPTOTIC SUPPRESSOR. THE BIR MOTIFS REGION INTERACTS WITH THE RECEPTOR ASSOCIATED FACTORS 1 AND 2 (TRAF1 AND TRAF2) TO FORM AN HETEROMERIC COMPLEX, WHICH IS THEN RECRUITED TO THE TUMOR NECROSIS FACTOR RECEPTOR 2 (TNFR2) (BY SIMILARITY).

-I- SUBUNIT: Interacts with SNAC and with PRSS25; these interactions inhibit apoptotic suppressor activity (By similarity).

-I- SUBCELLULAR LOCATION: Cytoplasmic (Potential).

-I- SIMILARITY: BELONGS TO THE IAP FAMILY.

-I- SIMILARITY: CONTAINS 3 BIR REPEATS.

-I- SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the Extended the Extended Bioinformatics Institute. There are no restructed by non-profit institutions as long as its content use by non-profit institutions are long as its content use by non-profit institutions are long as its content use by non-profit institutions are long as its content use by non-profit institutions are long as its content use by non-profit institutions are long as its content use by non-profit institutions are long as its content use by non-profit institutions are long as its content use by non-profit institutions are long as its content use by non-profit institutions are long as its content use by non-profit institutions are long as its content use by non-profit institutions are long as its content use by non-profit institutions are long as its content use by non-profit institutions are long as its content use by non-profit institutions are long as its content use by non-profit institutions are long as its content use by non-profit institutions are long as its content use by non-profit institutions are long as its content use by non-profit institutions are long as its content use by non-profit institutions are long as its content use by non-profit institutions are long as its content use by non-profit institutions are long as its content use by non-profit institutions are long as its content use by non-profit institutions are long as its content use and long are long as its content use are long as its content use and long are long as its content use are long as its content use and long are long as its content use and long are long as its content use are long as its content use are long as its content use are long as its content use are long as its content use are long as its content use are long as its content use are long as its content use are long as its content use are long as its content use are long as its content use are long as its content use are long as its content use ar
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Liston P., Lefebvre C., Fong W.G., Xuan J.Y., Korneluk R.G.;
"Genomic characterization of the mouse inhibitor of apoptosis protein and 2 genes.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Genomics 46:495-503(1997).
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   187
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    or send an email to license@isb-sib.ch).
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                                                                      1 LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF 46
LAKAGFYYIGPGDRVACFACDGKLSNWERKDDAMSEHQRHFPSCPF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PS01282; BIR_REPEAT_1; 3. PS50143; BIR_REPEAT_2; 3. PS50209; CARD; 1.
                                                                                                                                                                                                                                                                                            27
167
253
.436
553
600 /
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                                                                                                                                                Conservative
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                                                                                                                                                                                                                                                                                            233 B
320 B
525 C
588 R
67198 MW;
                                                                                                                                                                               88.0%;
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                                                                                                                                                Score 235; DB Pred. No. 7.7e 1; Mismatches
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BIR 2.
BIR 3.
CARD.
RING-TYPE.
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                                                                                                                                                                               DB 1;
.7e-23;
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BIR4_HUMAN
ID BIR4_H
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DT 01-OCT
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R4_HUMAN

BIR4_HUMAN

P98170; Q9NQ14;

T 01-OCT-1996 (Rel. 34, Created)

T 01-CT-1996 (Rel. 34, Last sequence update)

T 15-JUN-2002 (Rel. 41, Last annotation update)

T 15-JUN-2012 (Rel. 41, Last annotation update)
                                                                                                                                                                                                                     Query Match
Best Local S
Matches 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro; IPR001370; BIR.
InterPro; IPR001315; CARD;
InterPro; IPR001841; Znf_ring.
InterPro; IPR001841; Znf_ring.
Pfam; PF00097; zf-C3HC4; 1.
Pfam; PF00619; CARD; 1.
Pfam; PF00653; BIR; 3.
                                                                                                                                                                                                                                                                         ZN_FING
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -I- FUNCTION: APOPTOTIC SUPPRESSOR (BY SIMILARITY).

-I- SUBCELLUAR LOCATION: PREDOMINANTLY NUCLIAR.

-I- TISSUE SPECIFICITY: CELLS OF THE TIMPHOCYTE LINEAGE. F.

BOTH CORTICAL AND MEDULLARY CELLS OF THE THYMUS.

-I- DEVELOPMENTAL STAGE: HIGH LEVELS ARE INDUCED WITHIN 4-8

--CELL ACTIVATION IN SPLEEN AND THYMUS.

-I- SIMILARITY: BELONGS TO THE IAP FAMILY.

-I- SIMILARITY: CONTAINS 3 BIR REPEATS.

-I- SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
                                                                                                                                                                                                                                                                                                                                                                                                        PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE:
TISSUE-Spleen;
HEDLINE-97101112; PubMed-8945639;
MEDLINE-97101112; PubMed-8945639;
The R., Kimpton W.G., York J.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gallus gallus (Chicken).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                                                                              REPEAT
REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                SMART; SM00238; BIR; 3.
SMART; SM00114; CARD; 1
SMART; SM00184; RING; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; U27466; AAB48118.1; HSSP; Q13490; 1QBH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    use by non-profit institutions as long modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the Entropean Bioinformatics Institute. There are no restues by non-profit institutions as long as its content
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                                                                                                                                                                     196
                                                                                                                                                                                            1 LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFFKCPF 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Cell Biol.
                                                                                                                                                                  VAKAGLDDLGTADKVACVNCGVKLSNWEPKDNAMSEHRRHFPNCPF 241
                                                                                                                                                                                                                                                                                                                                                              E; PS01282; BIR_REPEAT_1;
E; PS50143; BIR_REPEAT_2;
E; PS50209; CARD; 1.
E; PS00518; ZF_RING_1; FALS
E; PS0089; ZF_RING_2; 1.
                                                                                                                                                                                                                      Similarity
33; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          an
                                                                                                                                                                                                                                                                                    ; Zinc-finger;
30 97
176 242
262 329
446 536
564 599
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71.7%;
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Repeat; Nuclear
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                                                                                                                                                                                                                                                                                    BIR 1.
BIR 2.
BIR 3.
CARD.
RING-TYPE.
                                                                                                                                                                                                                                 Score 186;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                             FALSE_NEG
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                                                                                                                                                                                                                     Mismatches
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l.7e-16;
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                                   (Inhibitor
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                                                                                                                                                                                                                        10;
                                                                                                                                                                                                                                              Length 611;
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                                of apoptosis
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                                                                                                                                                                                                                     Gaps
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TISSUE-Fetal heart;

MEDLINE-96256286; PubMed-8654366;

Duckett C.S., Nava V.E., Gedrich R.W., Clem R.

Glifillan M.C., Shiels H., Hardwick J.M., Thom
"A conserved family of cellular genes related
gene and encoding apoptosis inhibitors.";
the European Bioinformatics Institute. There are no restrictions on its way non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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Liston P., Roy N., Tamai K., Lefebvre C., Baird S., Chert Farahani R., McLean M., Ikeda J., Mackenzie A., Korneluk "Suppression of apoptosis in mammalian cells by NAIP and family of IAP genes.";
Nature 379:349-353(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE=21020961; PubMed=11140637;
Liu Z., Sun C., Olejniczak E.T., Meadows R.P.,
Herrmann J., Wu J.C., Fesik S.W.;
"Structural basis for binding of Smac/DIABLO to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Verhagen A.M., Silke J., Ekert P.G., Connolly L.M., Day C.L., Tikoo A., B Simpson R.J., Vaux D.L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               [6]
STRUCTURE BY NMR OF 241-356 IN COMPLEX WITH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "HtrA2 promotes cell death through its ability to antagonize inhibitor J. Biol. Chem. 277:445-454(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MUTAGENESIS OF ASP-148; ASP-214; ASN-259; TRP-310 AND GLU-314
MEDLINE-21634829; PubMed-11604410;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Grafham D.;
Submitted (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               protein 3) (X-linked inhibitor (IAP-like protein) (HILP).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nature 408:1004-1008(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Nature 388:300-304(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "X-linked IAP is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE-97373959;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FUNCTION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens (Human).
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                                                                                                                                                                                                                                  LEUKOCYTES.

DOMAIN: The second BIR domain is sufficient to inhibit caspase-3 and -7, while the third BIR is involved in caspase-9 inhibition. The interactions with SMAC and PRSS25 are mediated by the second and third BIR domains.
                                                                                                                                                                                                                                                                                                                                                                                                                                   FUNCTION: Apoptotic suppressor. Inhibitor of caspase-3, -7 and - SUBUNIT: Interacts with SMAC and with PRSS25; these interactions
                                                                                                                                                                              and third BIR domains.
SIMILARITY: BELONGS TO THE IAP FAMILY.
SIMILARITY: CONTAINS 3 BIR REPEATS.
SIMILARITY: CONTAINS 1 RING-TYPE ZINC
                                                                                                                                                                                                                                                                                                                                                          inhibit apoptotic suppressor activity.
SUBCELLULAR LOCATION: Cytoplasmic.
TISSUE SPECIFICITY: UBIQUITOUS, EXCEPT PERIPHERAL
                                                                  SWISS-PROT entry is copyright. It is produced through a cen the Swiss Institute of Bioinformatics and the EMBL European Bioinformatics Institute. There are no restrict by non-profit institutions as long as its content is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (APR-2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Takahashi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     akahashi R., Salvesen G.
a direct inhibitor of c
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Primates;
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Catarrhini;
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Jurke R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      M., Thompson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       G.S., Reed J
cell-death
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 serine protease activity apoptosis proteins. ";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Vertebrata;
                                                                                                                                                                                   FINGER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hominidae;
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n C.I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       proteases.";
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                                                                                                                                                                                                                                                                                                                                                                      BLOOD
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                                                                                                                     a collaboration
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Best Local
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InterPro; IPR001841; Znf_ring.
Pfam; PP00097; Zf-C3HC4; 1.
Pfam; PP00653; BIR; 3.
SMART; SM00238; BIR; 3.
SMART; SM00184; RING; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q60989; O08865;
O1-NOV-1997 (Rel. 35, Created)
O1-NOV-1997 (Rel. 35, Last sequence update)
O1-NOV-1997 (Rel. 35, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Baculoviral IAP repeat-containing protein 4 (:
protein 3) (X-linked inhibitor of apoptosis p:
(IAP homolog A) (MIAP3) (MIAP-3).
BIRC4 OR API3 OR XIAP OR AIPA OR MIHA.
                                                                                                      Farahani R., Lefebvre C., Submitted (JUN-1997) to t. -1- FUNCTION: Apoptotic s
                                                                                                                                                                                              Proc.
                                                                                                                                                                                                           Uren A.G., Pakusch M., Hawkins C.J., Puls K.L.. Vaux D.L.; "Cloning and expression of apoptosis inhibitory protein homolog: function to inhibit apoptosis and/or bind tumox necrosis factor receptor-associated factors."; "Proc. Natl. Acad. Sci. U.S.A. 93:4974-4978(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CONFLICT
                                                                                                                                                                                                                                                                                                                    STRAIN=C57BL/6 X CBA;
MEDLINE=96209843; Publ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PDB; 10
Genew;
                                                                                                                                                                      SEQUENCE FROM
                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=10090;
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ZN_FING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PROSITE; PS01282; BIR_REPEAT_1; 3.
PROSITE; PS00143; BIR_REPEAT_2; 3.
PROSITE; PS00518; ZF_RING_1; FALSE_NEG.
PROSITE; PS50089; ZF_RING_2; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF
(By similarity).
SUBDNIT: Interacts with SMAC and with PRSS25; these interactions inhibit apoptotic suppressor activity (By similarity).
SUBCELLULAR LOCATION: Cytoplasmic (By similarity).
DOMAIN: The second BIR domain is sufficient to inhibit caspase-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             L; U45880; AAC50373.1;
L; U32974; AAC50518.1;
L; AL121601; CAB95312.1
; 1G3F; 10-JAN-01.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        300079;
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423
497
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163
265
450
214
314
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (Mouse).
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                                                                                                                                                                                                                                                                                                                    CBA; TISSUE=Liver;
PubMed=8643514;
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423
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230
330
485
214
314
                                                                                                                                                                                                                                                                                                                                                                                                                           Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     56684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     68.2%;
69.6%;
                                                                                                    ., Korneluk R.G., Mackenzie the EMBL/GenBank/DDBJ datak suppressor. Inhibitor of ca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Repeat; Thiol protease inhibitor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MW;
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BIR 2.
BIR 3.
RING-TYPE.
D->S: REDUCED INT
E->S: DECREASED 1
E->S: DECREASED 1
S-> C (IN REF. 1
O-> P (IN REF. 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 182; DB Pred. No. 4.5e 1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                      Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -> C (IN REF. 1).
-> P (IN REF. 2).
9D394C16D45EB635
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 1;
.5e-16;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (Inhibitor protein) (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  13;
                                                                                                         databases
of caspas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CRC64;
                                                                                                         caspase-3,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                A.E.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             or of apoptosis (X-linked IAP)
                                                                                                                                                                                                                                                                        homologs that
                                                                                                           -7
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                                                                                                                                                                                   RESULT
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Best Local S
Matches 31
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SMART; SM00238; RING; 1.
SMART; SM00184; RING; 1.
PROSITE: PS01282; BIR_REPEAT_1; 3
PROSITE: PS50143; BIR_REPEAT_2; 3
PROSITE: PS50518; ZF_RING_1; FALS
PROSITE: PS50089; ZF_RING_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HSSP; Q13490; 1QBH.

MGD; MGT:107572; Birc4.

InterPro; IPR001370; BIR.

InterPro; IPR001841; Znf_ring.

Pfam; PF00097; Zf-C3HC4; 1.

Pfam; PF00653; BIR; 3.
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CONFLICT
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                                                                                          BIR4_RAT STANDARD; PRT; 496 AA. 09R016; 16-OCT-2001 (Rel. 40, Created) 16-OCT-2001 (Rel. 44, Last sequence update) 15-OUT-2002 (Rel. 41, Last annotation update) Baculoviral IAP repeat-containing protein 4 (in protein 3) (X-linked inhibitor of apoptosis purportein 3) (X-linked inhibitor of apoptosis purportein 3)
                                         Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                       (IAP homolog A) (RIAP-3).
BIRC4 OR API3 OR XIAP.
                                                                                                                                                                                                                                                                                                                                                                                                                         REPEAT
ZN_FING
         SEQUENCE FROM N.A.
                                                              Rattus
                                                                                                                                                                                                                                                                                                       SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; U36842; AAC52594.1; -. EMBL; U88990; AAB58376.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              entities requires a license agreement (S or send an email to license@isb-sib.ch).
                            NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       between the Swiss Institute of Bioinfi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through a
                                                                                                                                                                                                                                                                                                                                                                                                                                                 REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                             REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Apoptosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     modified and this statement
                                                                                                                                                                                                                    184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                and -7, while the third BIR is involved in The interactions with SMAC and PRSS25 are and third BIR domains (By Similarity). SIMILARITY: BELONGS TO THE IAP FAMILY. SIMILARITY: CONTAINS 3 BIR REPEATS. SIMILARITY: CONTAINS 1 RING-TYPE ZINC FING SIMILARITY: CONTAINS 1 RING-TYPE ZINC FING
                                                                                                                                                                                                                   LASAGLYYTGADDQVQCFCCGGKLENWEPCDRAWSEHRRHFPNCFF
                                                                                                                                                                                                                            LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF
                                                            norvegicus (Rat).
                                                                                                                                                                                                                                                            Similarity
31; Conserv
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                                                                                                                                                                                                                                                                                                     449
462
468
490
496 AA;
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                                                                                                                                                                                                                                                                                                                                                                                163
264
449
208
317
346
                                                                                                                                                                                                                                                            Conservative
                                         Chordata;
Rodentia;
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329
484
208
208
317
317
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449
468
468
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                                                                                                                                                                                                                                                                     66.3%;
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1; Mismatches
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BIR
BIR
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                                         Craniata; Vertebrata;
Sciurognathi; Muridae;
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                                                                                                                                                                                                                                                                      2e-15;
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REF.
REF.
REF.
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                                                                                            (Inhibitor of apoptosis protein) (X-linked IAP)
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                                         Euteleostomi;
Murinae; Rattus.
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Best Local :
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HSSP; Q13490; 1QBH.
InterPro; IPR001370; E
InterPro; IPR001841; Z
                                                                                                                                                                                                                                                                               Q96P09; Q96RW5;
15-JUN-2002 (Rel. 41, Created)
15-JUN-2002 (Rel. 41, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Baculoviral IAP repeat-containing protein 8 (Inhibitor of apoptosis-
like protein 2) (IAP-like protein 2) (ILP-2) (Testis-specific inhibitor of apoptosis).
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ZN_FING
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pfam; PF00097; zf-C3HC4; 1.
Pfam; PF00653; BIR; 3.
SMART; SM00128; BIR; 3.
SMART; SM00184; RING; 1.
PROSITE; PS01282; BIR_REPEAT_1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                       TISSUE=Testis;
PubMed=11597143;
Lagace M., Xuan J.-Y.,
Rajcan-Separovic E., Ko
                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PROSITE; PS01282; PROSITE; PS50143;
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                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                       NCBI_TaxID=9606
                                                                                                                                                                                                                                                     Homo
                                                                                                                                                                                                                                                                            BIRC8 OR ILP2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BIR8_HUMAN
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REPEAT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     184 LASAGLYYTGIDDQVQCFCCGGKLKNWEPCDRAWSEHRRHFPNCFF 229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFFKCPF 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (By similarity).

(By similarity).

SUBUNIT: Interacts with SMAC and with PRSS25; these interactions inhibit apoptotic suppressor activity (By similarity).

SUBCELLULAR LOCATION: Cytoplasmic (By similarity).

DOMAIN: The second BIR domain is sufficient to inhibit caspase-3 and -7, while the third BIR is involved in caspase-9 inhibition. The interactions with SMAC and PRSS25 are mediated by the second and third BIR domains (By similarity).

SIMILARITY: BELONGS TO THE IAP FAMILY.

SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINSER.
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                                                                                                                                                                                                                 sapiens (Human).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PS50143; BIR_REPEAT_2; 3. PS00518; ZF_RING_1; FALSE_NEG PS50089; ZF_RING_2; 1.
  organization
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26 93
163 230
264 329
449 484
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IPR001841; Znf_ring.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STANDARD;
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  of,
                                                 Young S.S., McRoberts C.,
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     the
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BIR 2.
BIR 3.
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  X-linked inhibitor
                                                                                                                                                                                                 Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
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                                                 Maier
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apoptosis
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BIR8_PANTR
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Best Local S
Matches 23
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EMBL; AF144682; AAK81992.1; -.
Genew; HGNC:14878; BIRC8.
InterPro; IPR001370; BIR.
InterPro; IPR001841; Znf_ring.
InterPro; BIR; 1
Pfam; PF00097; zf-C3HC4; 1.
PROSITE; PS01282; BIR, REPEAT_1; 1.
PROSITE; PS01282; BIR_REPEAT_2; 1.
PROSITE; PS01281; ZF_RING_1; FALSE_N
PROSITE; PS00181; ZF_RING_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                          BIR8_PANTR
Q95M72;
15-JUN-2002
15-JUN-2002
15-JUN-2002
                                                                                                                                                                                                                                                                                                                                 15-JUN-2002 (Rel. 41, Created)
15-JUN-2002 (Rel. 41, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Baculoviral IAP repeat-containing protein 8 (1
like protein 2) (IAP-like protein 2) (ILP-2).
BIRCS OR ILP2.
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REPEAT
ZN_FING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            the European Bloinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
Richter B.W.M., Mir S.S., Eiben L.J., Franktini A., Tian L., Frank S., Youle Notarangelo L.D., Vezzoni P., Fearnhea
                                                                     SEQUENCE FROM N.A.
MEDLINE-21286921; PubMed-11390657;
Richter B.W.M., Mir S.S., Eiben L.
                                                                                                                                                                                                Eukaryota; Metazoa;
Mammalia; Eutheria;
NCBI_TaxID=9598;
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Mol. Cell. Biol. 2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Genomics
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Genomics 77:181-188(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FUNCTION: Protects against apoptosis mediated SUBCELLULAR LOCATION: Cytoplasmic (Probable). SUBUNIT: Binds to caspase-9. TISSUE SPECIFICITY: Testis-specific in normal SIMILARITY: BELONGS TO THE IAP FAMILY. SIMILARITY: CONTAINS 1 BIR REPEAT. SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
                                                                                                                                                                                                                                          troglodytes (Chimpanzee).
aryota; Metazoa; Chordata;
malia; Eutheria; Primates;
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23; Conservative
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RING-TYPE.
Y -> H (IN REF. 2).
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Pred. No. 1.3e-11
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      en L.J., Lewis J., Reffey S.B., , Youle R.J., Nelson D.L., Fearnhead H.O., Duckett C.S.;
                                                                                                                                                                                                                                             Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Pan.
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Q24307; Q24177;
Q1-NOV-1997 (Rel
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Drosophila melanogaster (Fruit fly).
Eukaryota; Metazoa; Arthropoda; Mandibulata;
Eukaryota; Neoptera; Endopterygota;
Insecta; Pterygota; Neoptera; Endopterygota;
Drosophilidae; Drosophilidae; Drosophilidae;
MEDLINE-96149249; PubMed-8552191;
Liston P., Roy N., Tamai K., Lefebvre C., Baird
Farahani R. McLean M., Ikeda J., Mackenzie A.,
"Suppression of apoptosis in mammalian cells by
family of IAP genes.";
                                                                                                                                                                                                                                                                          TISSUE-Eye imaginal disk;
MEDLINE-96128128; PubMed-8548811;
Hay B.A., Wassarman D.A., Rubin G.M.;
"Drosophila homologs of baculovirus i.
function to block cell death.";
cell 83:1253-1262(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Apoptosis 2 inhibitor (Inhibitor of apoptosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PROSITE; PS50143; BIR_REPEAT_2; PROSITE; PS00518; ZF_RING_1; FAPROSITE; PS50089; ZF_RING_2; 1.
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NCBI_TaxID=7227;
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PROSITE; PS01282; BIR_REPEAT_1; 1.
PROSITE; PS50143; BIR_REPEAT_2; 1.
PROSITE; PS00518; ZF_RING_1; FALSE_NEG
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InterPro; IPR001841; Znf_ring.
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IAP2 OR ILP OR DIHA OR CG8293.
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SIMILARITY: BELONGS TO THE IAP FAMILY.
SIMILARITY: CONTAINS 1 BIR REPEAT.
SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
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SUBCELLULAR LOCATION:
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236 AA;
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27136 MW;
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RA Abril J.F., Agbayani A., An H.-J., Andrews-Pfannkoch C., Baldwin D.,
RA Ballew R.M., Basu A., Baxendale J., Bayraktaroglu L., Beasley E.M.,
RA Ballew R.M., Bason S.P. W., Berman B.P., Bhandari D., Bolshakov S.,
RA Borkova D., Botchan M.R., Bouck J., Brokstein P., Brottler P.,
RA Burtis K.C., Busam D.A., Butler H., Cadiou E., Center A., Chandra I.,
RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davles P.,
RA Gebalos B., Delcher A., Deng Z., Ways A.D., Dew I., Distz S.M.,
RA Dodson K., Doup L.E., Downes M., Dugan-Rocha S., Dunkov B.C., Dunn P.,
RA Dodson K., Doup L.E., Downes M., Dugan-Rocha S., Dunkov B.C., Dunn P.,
RA Fosler C., Gabrielian A.E., Garg N.S., Gelbart W.M., Glasser K.,
RA Glodek A., Goog F., Gorrell J.H., Gu Z., Guan P., Harris M.,
RA Horstin D., Houston K.A., Howland T.J., Wei M.-H., Ibegwam C.,
RA Horstin D., Houston K.A., Howland T.J., Wei M.-H., Ibegwam C.,
RA Kimmel B.E., Kodira C.D., Kraft C., Kravitz S., Kulp D., Lai Z.,
RA Liu X., Mattel B., McIntosh T.C., McLeod M.P., McPherson D.,
RA Merkulov G., Milshina N.V., Mobarry C., Morris J., Moshrefi A.,
RA Menta S.M., Woy M., Murphy B., Murphy L., Muzny D.M., Nelson D.L.,
RA Reinert K., Remington K.A., Nixon K., Nusskern D.R., Pacleb J.M.,
RA Spier E., Stedling A.C., Stapleton M., Strong R., Sun E., Shen H.,
RA Spier E., Spradling A.C., Stapleton M., Strong R., Sun E., Shen H.,
RA Wang Z.-Y., Wassarman D.A., Weinstock G.M., Weissenbach J.,
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RA Wang S.-M., Weinsch G.M., Shan M., Zhang G., Zhao Q.A.,
RA Sheng X.H., Zhong F.N., Zhong W., Zhan K., Zhu X., Smith H.O.,
RA Gibbs R.A., Myers E.M., Rubin G.M., Shan M., Zhang G., Zhao Q.A.,
Shin H., Chang R., Shan M., Wenter J.,
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Ra Gibbs R., Shan M., Wenter S., Shu 
                                                                                      Uren A.G., Pakusch M., Hawkins C.J., Puls K.L., Vau
"Cloning and expression of apoptosis inhibitory pro
function to inhibit apoptosis and/or bind tumor nec
receptor-associated factors.";
Proc. Natl. Acad. Sci. U.S.A. 93:4974-4978(1996).
-!- FUNCTION: APOPTOTIC SUPPRESSOR. OVEREXPRESSION
HID-DEPENDENT CELL DEATH IN THE EYE.
-!- DEVELOPMENTAL STAGE: EXPRESSED AT HIGH LEVELS T
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                                                                                                                                                                                                             Endrizzi M.G., Hadinoto V., Growney "Genomic sequence analysis of the mc Genome Res. 10:1095-1102(2000).
                                                                                                                                                                                                                                                                                                                                   Mus musculus (Mouse).
Mus musculus (Mouse).
Tharvota; Metazoa; Chordata;
Tharvota; Metazia; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                               Baculoviral IAP repeat-containing inhibitory protein 7). BIRC1G OR NAIP7.
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                                                                                                                                                                                                                                                                                              SEQUENCE FROM
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Mol. Cell. Biol. 21:4292-4301(2001)
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InterPro; iPR001841; Znf_ring.
Pfam: PF00653; BIR; 1.
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23 LARAGFYAIGQEDKIQCFHCGGGLANWKPKEDPWEQHAKWYPGCKY
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European Bioinformatics Institute. The by non-profit institutions as long ified and this statement is not removed ities requires a license agreement (See
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Baculoviral in.
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BirCl OR NAIP.
Homo sapiens (Human).
Homo sapiens (Human).
Homo sapiens; Metazoa; Chordata; Cr
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REPEAT
                                                        SEQUENCE OF 222-1403
Jones K., Graves T.,
                                                                                                                                                            der Steege G., Draa.
Anzevino R., Velona
Buys C.H.C.M.;
                                                                                                                                                                                  SEQUENCE OF 386-623 FROM N.A. der Steege G., Draaijers T.G., Anzevino R., Velona I., Brahe
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Chen Q., Baird S.D., Mahadevan M., Besner-Johnston A., Farahani R.,
Xuan J.-Y., Kang X., Lefebvre C., Ikeda J.-E., Korneluk R.G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A., AND REVISIONS. TISSUE-Brain;
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InterPro; IPR001370; BIR.
Pfam; PF00653; BIR; 3.
SMART; SM00238; BIR; 3.
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                                                                                                                                                                                                                                                                                                 "Sequence of a 131-kb region of 5q13.1 containing the spinal muscular atrophy candidate genes SMN and NAIP."; Genomics 48:121-127(1998).
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                      EMBL/GenBank/DDBJ databases
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                                                                                                                                                                                                                                                                                                                                                                                                                                                         This SWISS-PROT entry is copyright. It is produced through a between the Swiss Institute of Bioinformatics and the EMBI the European Bioinformatics Institute. There are no restrict use by non-profit institutions as long as its content is modified and this statement is not removed. Usage by and formodified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Liston P., Roy N., Tamai K., Lefebvre C., Bai Farahani R., McLean M., Ikeda J., Mackenzie Farahani R. apoptosis in mammalian cells family of IAP genes."
                                                                                                                                                                                                                                                PROSITE; PS01282; BIR_REPEAT_1; PROSITE; PS50143; BIR_REPEAT_2; PROSITE; PS50837; NACHT; 1.
                                                                                                                                                                                                                                                                                                                                                                 EMBL; U19251; AAC52045.1; -. EMBL; U80017; AAC52047.1; -. EMBL; U21913; AAA64504.1; -. EMBL; AC005031; AAC62261.1;
                                                                                                                                                                                                                                                                                       Pfam; PF00653; BIR; 3. SMART; SM00238; BIR; 3.
                                                                                                                                                                                                                                                                                                                             MIM; 600355;
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                                                                                                                                                                                                                                                                                                                                                       HSSP; Q13490; 1QBH
                                                                                                                                                                                                                                                                                                                                                                                                                                   or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                               entities requires a license agreement (See http://www.isb-sib
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -I- TISSUE SPECIFICITY: EXPRESSED IN MOTOR NEURONS, NEURONS, FOUND IN LIVER AND PLACENTA, AND IN A I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=96149249; PubMed=8552191;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TISSUE=Liver;
                                                                                                                                                                                                                                                                                                                  InterPro;
 299
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SIMILARITY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DISEASE: MUTATED OR DELETED FORMS OF NAIP HAVE BEEN FOUND IN INDIVIDUALS WITH SPINAL MUSCULAR ATROPHY TYPE I (SMA TYPE 1). SN ARE FATAL AUTOSOMAL RECESSIVE DISORDERS SUBCLASSIFIED AS TYPE 1 (WERDNIG-HOFFMANN DISEASE), TYPE II (INTERMEDIATE FORM), AND TYF III (WOHLFARF-KUGELBERG-WELANDER DISEASE) BASED UPON THE AGE OF ONSET AND CLINICAL SEVERITY. THESE NEUROBEGENERATIVE DISORDERS CHARACTERIZED BY DEGENERATION OF LOWER MOTOR NEURONS, LEADING TO PROGRESSIVE PARALYSIS MUSCULAR ATROPHY. CONCERNS 1 IN 6000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NEURONS. FOUND
SPINAL CORD.
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LAKAGLFYTGIKDIVQCFSCGGCLEKWQEGDDPLDDHTRCFPNCPF
             LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF
                                                                                                                                                                                                                                                                                                                                          HGNC:7634; BIRC1.
                                                                Similarity
                                                                                                                                                                                                                                                                                                                 IPR001370; BIR.
                                                                                                       159
278
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CONTAINS 1 NACHT DOMAIN.
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                                                                                                   BIR 1.
BIR 2.
BIR 3.
BIR 3.
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BIR 3.
VP -> YR (IN REF. 4).
VP -> ST (IN REF. 3).
M -> V (IN REF. 3).
Y -> H (IN REF. 3).
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Database
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Maximum DB seq length: 200000000
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Sequence:
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267
1 LAKAGFYYIGPGDI
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                                                                   PIR_73:*
                                                                                                          Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                      LAKAGFYYIGPGDRVACFAC.....WEPKDNAMSEHLRHFPKCPF 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GenCore version 5.1.4_p5_4578 Copyright (c) 1993 - 2003 Compugen Ltd.
                                pir2:*
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                 pir3:*
                                                                                                                                                                                                                                                                                                                                                                                                                                         5, 2003, 15:58:42; Search time 5.03456 Seconds
(without alignments)
878.365 Million cell updates/sec
pir4:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score 264 254	Query Match 98.9	Length 604 358	22 - 8	ID	Description apoptosis i
. ω	248	92.9	618	N	\$68450	apoptosis
4-	182	٠	497	2	S69544	apoptosis
. UT	145	•	496	N	S68452	apoptosis
6	145	•	497	2	S69545	apoptosis
7	141	•	1232	N	A55478	neuronal
8	138	•	1447	N	T42628	neuronal
9	135	•	268	N	T10304	inhibitor
10	w	•	268	N	A53989	apoptosis-
11	131	٠	275	N	A45679	inhibitor-of-apop
12	122.5	•	4845	N	T31067	BIR repeat
13	121	•	298	N	JC7568	\circ
14	112	41.9	208	N	T03183	$\mathbf{-}$
15	103	•	997	N	T43523	cut17 protein
16	100	•	150	Ŋ	T28409	S
17	98	•	155	ν	T30489	apoptosis
18	95	•	292	N	T41772	IAP1 orf27
19	93	•	286	N	D36828	orf13 protein
20	90	•	275	N	T10310	apoptosis-inhibiti
21	74.5		329	N	T28403	ORF MSV242
22	68	•	155	N	T37471	apoptosis
23	62.5	•	223	N	S16652	hypothetical
24	60		249	N	H72858	apoptosis
25	60	•	249	N	T41814	IAP2 orf71
26	59	•	355	N	C64549	conserved
27	59	•	355	N	G71958	hypothetical
28	58	•	234	s	中なりょうプ	probable apoptosis
)	л 7	יי נר		•	100467	

Matches

43;

Conservative

Mismatches

Indels

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Gaps

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45	44	43	42	41	40	39	38	37	36	35	34	ü	32	31	30	
53	53.5	53.5	53.5	54	54	54	54.5	55	55	55	55	55	56	56.5	56.5	
19.9	20.0	20.0	20.0	20.2	20.2	20.2	20.4	20.6	20.6	20.6	20.6	20.6	21.0	21.2	21.2	
838	741	563	172	843	606	181	546	1433	469	469	462	313	1004	2236	724	
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A48440	T40095	VCMVM7	T34035	A27340	T13152	E36794	A81807	S54587	T47015	AB0237	T47287	T02534	JH0470	QZFF	C49423	
ring-infected eryt	Zinc finger, C3HC4	env polyprotein -	hypothetical prote	complement C7 prec	WDR1 protein - hum	hypothetical prote	fumarate hydratase	CAT8 protein - yea	hypothetical prote	probable membrane	hypothetical prote	hypothetical prote	Na+/K+-exchanging	rudimentary protei	semaphorin II prec	

ALIGNMENTS

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apoptosis inhibitor - pig
C;Species: Sus scrofa domestica (domestic pig)
C;Species: Sus scrofa domestica (domestic pig)
C;Species: 04-Sep-1998 #sequence_revision 04-Sep-1998 #text_change 02-Sep-2000
C;Accession: JC5964
R;Stehlik, C; de Martin, R; Binder, B.R; Lipp, J.
Blochem. Biophys. Res. Commun. 243, 827-832, 1998
A;Title: Cytokine induced expression of procine inhibitor of apoptosis prote A;Reference number: JC5964; MUID:98162622; PMID:9501011
A;Accession: JC5964
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JC5964
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S68449
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C; Superfamily: RING finger homology
C; Keywords: apoptosis; zinc finger
C; Keywords: apoptosis; zinc finger homology <RNG>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                apoptosis inhibitor hiap-1 - human
C;Species: Homo sapiens (man)
C;Date: 17-Jul-1998 #sequence_revision 17-Jul-1998 #text_change 21-Jul-2000
                                                                            A;Cross-references: GB:U79142; NID:g2957174; PIDN:AAC39171.1; PID:g2957175 C;Superfamily: RING finger homology <RRN>
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                                                                                                                                                               A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-358 <STE>
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A; Residues: 1-604 <LI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Accession: S68449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                R;Liston, P.; Roy, N.; Tamai, K.; Lefebvre, C.; Baird, S.; Cherton-Horvat, G.; Faraha Nature 379, 349-353, 1996.
A;Title: Suppression of apoptosis in mammalian cells by NAIP and a related family of A;Reference number: A58182; MUID:96149249; PMID:8552191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Status: nucleic acid sequence not shown
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 98.9%; Score 264; DB 2; Best Local Similarity 97.8%; Pred. No. 1.1e-24; Matches 45; Conservative 1; Mismatches 0
  Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1-604 <LIS>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL: U45878; NID: g1184315; PIDN: AAC50371.1; PID: g1184316
95.1%;
  Score 254; DB 2;
Pred. No. 1.2e-23;
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184

LASAGLYYTGIGDQVQCFCCGGKLKNWEPCDRAWSEHRRHFPNCFF

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A;Description: apoptotic suppressor
C;Superfamily: apoptosis inhibitor IAP homolog;
C;Keywords: apoptosis; zinc finger
F;446-490/Domain: RING finger homology <RRN>
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                                                                                                                                                                                                                                                         A; Molecule type: mRNA
A; Molecule type: mRNA
A; Residues: 1-161,'C',163-422,'Q',424-497 <LIS>
A: Cross-references: EMBL:U45880; NID:g1184319;
                                                                                                                                                                                                                                                                                                                              A;Cross-references: EMBL:U32974; NID:g1016687; PIDN:AAC50518.1; PID:g1016688 R;Liston, P.; Roy, N.; Tamai, K.; Lefebvre, C.; Baird, S.; Cherton-Horvat, G. Nature 379, 349-353, 1996
A;Title: Suppression of apoptosis in mammalian cells by NAIP and a related far, Reference number: A58182; MUID:96149249; PMID:8552191
A;Accession: S68451
A;Status: nucleic acid sequence not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               apoptosis inhibitor IAP homolog - C;Species: Homo sapiens (man) C;Date: 06-Dec-1996 #sequence_revi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 4
S69544
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Nature 379, 349-353, 1996
A:Title: Suppression of apoptosis in mammalian cells by NAIP and a related family of IAF A:Reference number: A58182; MUID:96149249; PMID:8552191
                                                                                                                                                                                                                                     A;Gene: ilp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Residues:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Status: preliminary; nucleic acid sequence not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Reference number: A; Accession: S69544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Title: A conserved family of cellular genes related to the A; Reference number: S69544; MUID:96256286; PMID:8654366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      R;Duckett, C.S.; Nava, V.E.; Gedrich, R.W.; Clem; R.J.; EMBO J. 15, 2685-2694, 1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C; Accession: S69544; S68451
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Status: nucleic acid sequence n
A;Molecule type: mRNA
A;Residues: 1-618 <LIS>
A;Cross-references: EMBL:U45879;
C;Function:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   apoptosis inhibitor hiap-2 - human C;Species: Home sapiens (man) C;Date: 17-Jul-1998 #sequence_revi. C;Accession: S68450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT
S68450
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                                                            Query Match
Best Local S
Matches 32
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LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKDPF 46
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1-497 <DUC>
                                                                                 Similarity
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                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       zinc finger
finger homology
                                                                           68.2%;
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91.3%; Pred.
                                                          1;
                                                        Score 182; DB Pred. No. 1.2e 1; Mismatches
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Mismatches
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No. 1.1e-22;
                                                                             DB 2;
.2e-14;
                                                                                                                                                                                                                                                                       PIDN: NAC50373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PIDN: AAC50372.1;
                                                                                                                                                                            RING
                                                                                                                                                                        finger homology
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                                                                                                 Length 497;
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  RESULT
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В
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C;Superfamily: apoptosis inhibitor IAP homolog;
C;Keywords: apoptosis; zinc finger
F;445-489/Domain: RING finger homology <RNG>
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A;Title: Suppression of apoptosis in mammalian cells by NAIP and a related family A;Reference number: A58182; MUID:96149249; PMID:8552191
A;Accession: S68452
                                       δÃ
                                                                                                                                                                                                                                                                           A;Cross-references: FlyBase:FBgn0015247C;Function:
                                                                                                                                                                                                                                                                                                                                         A;Molecule type: mRNA
A;Residues: 1-36,'AT',37,'K',39,'L',41-44,'H',46-58,'Q',60-412,'A',414-427,'A',429-49
A;Cross-references: EMBL:U45881; NID:g1184313; PIDN:AAC46988.1; PID:g1184314
                                                                                                                                                                                                                                                                                                                                                                                                                   A; Reference number: A; Accession: S78528
                                                                                                                                                                                                                                                                                                                                                                                                                                              submitted to the EMBL Data
A; Reference number: S78528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Status: nucleic acid sequence
A;Molecule type: mRNA
A;Residues: 1-496 <LIS>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C;Species: Drosophila melanogaster
C;Date: 17-Jul-1998 #sequence_revision 17-Jul-1998 #text_change 17-Nov-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                apoptosis inhibitor diap - fruit fly (Drosophila melanogaster)
C; Species: Drosophila melanogaster
                                                                                                                                                                                                                                                                                                                             C; Genetics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               R;Baird,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Cross-references: EMBL:U45881; NID:g1184313; PIDN:AAC46988.1; PID:g1184314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C; Accession: S68452;
                                                                                          Best Loc
Matches
                                                                                                                                       Query Match
131
                                                                                                                 Local
                                         1 LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCP
LAKAGFYYLNRLDHVKCVWCNGVIAKWEKNDNAFEEHKRFFPQCP
                                                                                                              Similarity
                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S78528
                                                                                                              54.3%;
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                                                                                          4.
                                                                                                            Score 145; DB 2;
Pred. No. 4.2e-10;
                                                                                             Mismatches
                                                                                                                                                                                                                                  RING finger
                                                                                             16;
                                                                                                                                    Length 496;
                                                                                             Indels
  175
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C; Superfamily: ap F; 446-490/Domain:
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                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT
S69545
                                                                                                                                                                                                                                                                               A; Title: A conserved family A; Reference number: S69544; A; Accession: S69545
                                                                                                                                                                         A; Gene: ilp
                                                                                                                                                                                                            A;Cross-references:
                                                                                                                                                                                                                             A; Residues:
                                                                                                                                                                                                                                               A; Molecule
                                                                                                                                                                                                                                                                  A;Status:
                                                                                                                                                                                                                                                                                                                                   R;Duckett, C.S.; Nava, V.E.; Gedrich, R.W.; Clem, R.J.; van Dongen, J.L.; Gilfillan, EMBO J. 15, 2685-2694, 1996
                                                                                                                                                                                             Genetics:
                                                                    Matches
                                                                                   Query Match
Best Local
133
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                                 بب
                                                                                                                                                                                                                             preliminary; nucleic acid sequence not shown
e type: mRNA
s: 1-497 <DUC>
                                 LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCP 45
LAKAGFYYLNRLDHVKCVWCNGVIAKWEKNDNAFEEHKRFFPQCP
                                                                    25;
                                                                                   Similarity
                                                                                                                                     apoptosis inhibitor IAP homolog;
in: RING finger homology <RRN>
                                                                    Conservative
                                                                                                                                                                                                            EMBL: U32373;
                                                                                 54.3%;
                                                                                                                                                                                                                                                                                                  of cellular genes related to MUID:96256286; PMID:8654366
                                                                                                                                                                                                            NID:g1019116;
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                                                                  Score 145; DB
Pred. No. 4.2e-
4; Mismatches
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10;
                                                                                                                                                          finger homology
                                                                                                    Length 497;
                                                                    Indels
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C;Genet1
A;Gene:
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F:479-496/Domain: transmembrane #status predicted <\mmi2>
F:476/Binding site: ATP (Lys) #status predicted
F:618.632,823,923,1035/Binding site: carbohydrate (Asn) (covalent)
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A; Residues: 1-1447 < YAR>
A; Cross.references: EMBL: AF102871;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      d, T.O.; de Jong, P.J.; Surh,
Cell 80, 167-178, 1995
A;Title: The gene for neurona.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       R;Roy, N.; Mahadevan, M.S.; McLean, d. T.O.; de Jong, P.J.; Surh, L.; I)
                                   A; Reference number: 217011;
                                                      Virology 229, 381-399, 1997
A; Title: The sequence of th
                                                                                             R;Ahrens,
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Mamm. Genome 10, 761-763, 199
A;Title: CDNA cloning and the 5'genomic organization of A;Reference number: Z22179; MUID:99315342; PMID:10384056
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
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C; Keywords: apoptosis; ATP; glycoprotein; nucleotide binding;
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A; Residues: 1-1232 <ROY>
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                   A; Accession: T10304
                                                                                                                            inhibitor of apoptosis protein 3 - Orgyia pseudotsugata nuclear polyhedrosis C;Species: Orgyia pseudotsugata nuclear polyhedrosis virus, OpMNPV (C;Date: 16-Jul-1999 #sequence_revision 16-Jul-1999 #text_change 15-Sep-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Reference number: A; Accession: T42628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            neuronal apoptosis inhibitory protein 2 -
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Cross-references: GB:U19251
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                                                                                                                Accession:
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                                                                                                                                                                                                                                                                                                                                                                            Query
                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                  181
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                                                                                                                                                                                                                                                                                        1 LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF
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preliminary; translated
                                                                                               C.A.;
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                                                                                             Russell,
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                                    the Orgyia pseudotsugata
11; MUID:97271300; PMID:9:
                                                                                         R.R.; Funk, C.J.; Evans, J.; Harwood,
                                                                                                                                                                                                                                                                                                                                                      51.7%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          mouse)
                                                                                                                                                                                                                                                                                                                                       Score 138; DB
Pred. No. 8.3e
5; Mismatches
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Pred. No. 3e-09;
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GB/EMBL/DDBJ
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            mouse
                                      tsugata mult:inucleocapsid PMID:9126251
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repeat containing

ubiquitin-conjugating enzyme

BRUCE

mouse

12

129

1 LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF

MADAGFFYTGYGDNTKCFYCDGGLKDWEPEDVPWEQHVRWFDRCAY 174

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A;Cross-references: EMBL:U75930; NID:g2934903; PIDN:AAC59034.1; VID:g1911281
C;Superfamily: viral apoptosis inhibitor IAP; RING finger homology
F;217-261/Domain: RING finger homology <RRN>
                                                                                                                                                                                          J. Virol. 67, 2168-2174, 1993
A;Title: An apoptosis-inhibiting baculovirus gene with a A:Paference number: A45679; MUID:93188168; PMID:8445726
                                                                                                                                                                                                                                      R;Crook, N.E.; Clem, R.J
J. Virol. 67, 2168-2174,
                                                                                                                                                                                                                                                                                          C;Species: Cydia pomonella granulosis v
C;Date: 21-Sep-1993 #sequence_revision
                                                                                                                                                                                                                                                                                                                                                                                                                            В
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A;Title: An apoptosis inhibiting gene from a nuclear polyhedrosis
A;Reference number: A53989; MUID:94187094; PMID:8139034
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              apoptosis-inhibiting protein - Orgyia pseudotsugata multicapsid nuclear polyhedrosis C;Species: Orgyia pseudotsugata multicapsid nuclear polyhedrosis virus, OpMNPV C;Date: 15-Oct-1994 #sequence_revision 15-Oct-1994 #text_change 15-Sep-2000
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A; Residues: 1-26
                                                                        C;Superfamily:
                                                                                                                            A; Molecule type: DNA
A; Residues: 1-275 < CRO>
                                                                                                                                                                                                                                                                                                             inhibitor-of-apoptosis polypeptide (IAP) - (C;Species: Cydia pomonella granulosis virus
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                                                                                            A; Note:
                                                                                                             A;Cross-references:
                                                                                                                                                                   A;Status: preliminary
                                                                                                                                                                                A; Accession: A45679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Molecule type: DNA
A; Residues: 1-268 <BIR>
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                   госат
                                                                       -references: GB:L05494; NID:g289583; PIDN:AAA43835.1; PID:g289584 sequence extracted from NCBI backbone (NCBIN:127014, NCBIP:127015) family: viral apoptosis inhibitor IAP; RING finger homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF
                                                                                                                                                                                                                                                                                                                                                                                                                        LAEAGFFYTGQGDKTRCFCCDGGLKDWEPDDAPWQQHARWYDRCEY 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           68, 2521-2528,
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Pred. No. 4e-09;
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Pred. No. 4e-09;
                 Pred.
                                    Score 131;
ore 131; DB 2;
ed. No. 1.3e-08;
Mismatches 17;
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C;Species: Mus musculus (house mouse)
C;Date: 22-Oct-1999 #sequence_revision 22-Oct-1999 #text_change 21-Jul-2000
C;Accession: T31067
R;Hauser, H.P.; Bardroff, M.; Pyrowolakis, G.; Jentsch, S.
J. Cell Biol. 141, 1415-1422, 1998
A;Title: A giant ubiquitin-conjugating enzyme related to IAP apoptosis inhil A;Reference number: Z20963; MUID:98292517; PMID:9828897
                                           A;Cross-references: EMBL:AF003534; NID:g2738385; PIDH:AAB94481.1; C;Superfamily: RING finger homology F;159-202/Domain: RING finger homology <RRN>
                                                                                                                                                                                                                                                    C;Accession: T03183
R;Bahr, U.; Tidona, C.A.; Darai, G.
Virus Genes 15, 235-245, 1997
                                                                                                                                                                                                                                                                                                                 probable apoptosis inhibitor - Chilo iridescent virus
C;Species: Chilo iridescent virus
C;Date: 24-Mar-1999 #sequence_revision 24-Mar-1999 #text_change 02-Sep-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Gene: kiap
A;Map position: 20q13.3
C;Keywords: apoptosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     R;Lin, J.H.; Deng, G.; Huang, Q.; Morser, J.
Biochem. Biophys. Res. Commun. 279, 820-831, 2000
A;Title: KIAP, a novel member of the inhibitor of apoptosis protein family.
A;Reference number: JC7568; MUID: 21092523; PMID:1:162435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    kidney inhibitor of apoptosis protein -
C;Speciles: Homo sapilens (man)
C;Date: 30-Jun-2001 #sequence_revision 3
C;Accession: JC7568
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A;Residues: 1-4845 <HAU>
A;Residues: 1-4845 <HAU>
A;Cross-references: EMBL:Y17267; NID:g3319989; PIDN:CAA76720.1; PID:g3319990
A;Note: localized to the Golgi compartment and the vesicular system
                                                                                                               A;Status: preliminary; translated from GB/EMBL/DDBJA;Molecule type: DNAA;Residues: 1-208 <BAH>
                                                                                                                                                                                A;Title: The DNA sequence of Chilo iridescent virus between the A;Reference number: Z14834; MUID:98141693; PMID:9482589 A;Accession: T03183
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R; Lin, J.H.; Deng,
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A;Contents: Fetal kidney
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49.0%;
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Pred. No. 2.1e
3; Mismatches
  Score 112;
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<u>ب</u>
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Search completed: May 5, Job time: 7.03456 secs

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A; Map position:
A; Introns: 43/3
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                                                                                                                                                                                                                                                                                A; Molecule type: DNA
A; Residues: 932-997
                                                                                                                                                                                                                                                                                                                                            A; Reference number:
A; Accession: T41700
                                                                                                                                                                                                                                                                                                                                                                                   A;Cross-references: EMBL:AL031323; PIDN:CAA20434.1; GSPDB:GN00065; SPDB:SPCC962.02c A;Experimental source: strain 972h-; cosmid c962 R;Wedler, H.; Duesterhoeft, A.; McDougall, R.C.; Rajandream, M.A.; Barrell, B.G. submitted to the EMBL Data Library, October 1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Reference number: A; Accession: T43523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  submitted to the EMBL Data Library, August 1999 A; Description: Fission yeast cutl7 is required A; Reference number: 222536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C;Accession: T43523; T41649; T41700
R;Morishita, J.; Matsusaka, T.; Yanagida, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C;Species: Schizosaccharomyces pombe
C;Date: 21-Jan-2000 #sequence_revision 21-Jan-2000
C;Accession: T43523; T41649; T41700
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                              A; Cross-references:
                                                                                                                                                                                                                                                                                                                        A;Status: translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Status: translated from GB/EMBL/DDBJ
A;Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Molecule type: mRNA
A; Residues: 1~997 <MOR>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Status: translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cut17 protein - fission yeast (Schizosaccharomyces pombe)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Residues: 1-997 <HAR>
                                                                                   Best Loc
Matches
                                                                                                                                                                                                                                         Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity Matches 19; Conserv
                                                                                                                             Query Match
                                                                                                                                                                                                                   Gene: cut17; SPCC962:02c; SPDB:SPCP31B10.10c
44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                58
                                                                                                       Local
                                        1 LAKAGFYY--IGPG-----DRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRH 40
LATYGFYYNPISESNSEERLDNYTCYMCTKSFYDWEDDDDPLKEHITHSPSCPW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LSRAGFIYLNIGDQVQCFYCDLKLKEWKRSDNPFEEHKKH 97
                                                                                   . Similarity
20; Conserv
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                                                                                                                                                                                                                                                              EMBL:AL121859; PIDN:CAB58376.1;
                                                                                                                                                                                                                                                                                  <WED>
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                                                                                   Score 103; DB 2;
Pred. No. 0.00012;
5; Mismatches 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
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15;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B.G.
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                                                                                                                                                                                                                                                              GSPDB:GN00068; SPDB:SPCP31B10.10c
                                                                                                                             Length 997;
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    97
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Result
No.
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Minimum
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OM protein -
                                                                                                                                                                                                                Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                      Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     seq length: seq length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein search, using sw model
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267
1 LAKAGFYYIGPGDF
                                                                                                                                                                    Query
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   SPTREMBL_21:*
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GenCore version 5.1.4_p5_4578 Copyright (c) 1993 - 2003 Compagen Ltd.
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sp_bacteria:*
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sp_archeap:*
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sp_unclassified:*
sp_rvirus:*
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                                                                                                                                                                                                                                                                                                                                                                             _invertebrate:*
                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20000000000
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Q8UWD2
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O57319 gallus gall
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O8e642 rattus norv
Q9esf0 rattus norv
Q9eq05 rattus norv
Q9eq06 rattus norv
Q9eq06 rattus norv
Q9eq07 rattus norv
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5	44	3	42	41	40	39	38	37	36	35	34	ω	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17
112	112	116	116	118	120	121	121	121	121	122.5	124	124	126	126	127	129	130	131	131	133.5	141	141	142	144	144	145	145	145
41.9	41.9	43.4	43.4	44.2	44.9	45.3				45.9	46.4	46.4		47.2	47.6	48.3	48.7	49.1	49.1	0	2	2	Ü	53.9	ü	4	54.3	54.3
208	109	268	268	276	313	298	298	280	261	4845	281	276	379	377	346	438	264	517	106	153	1160	597	405	402	236	498	236	236
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055770	Q8WMY4	Q9E232	Q91F18	089744	Q9J827	Q96CA5	Q9H2A8	Q9HAP7	Q9QES9	088738	Q9YNL8	Q8QL95	Q9U492	Q9NJ07	Q968T8	Q9VUX5	Q9EN27	Q8R4U8	Q96RW6	Q9VEM2	Q8TDZ4	Q9R015	Q8UWH2	Q8T621	Q95M71	Q960U3	Q95M72	Q96P09
O55770 chilo iride	Q8wmy4 bos taurus	Q9e232 helicoverpa			Q9j827 spodoptera	Q96ca5 homo sapien		homo	Q9qes9 epiphyas po	O88738 mus musculu	Q9ynl8 choristoneu	28q195 mamestra co			Q968t8 bombyx mori	Q9vux5 drosophila	Q9en27 amsacta moo	Q8r4u8 rattus norv	Q96rwó homo sapien	Q9vem2 drosophila	Q8tdz4 homo sapien	Q9r015 mus musculu	K3	Q8t621 aedes albop	Q95m71 gorilla gor		Q95m72 pan troglod	Q96p09 homo sapien

ALIGNMENTS

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RESULT
Q9ESE8
ID Q9
AC Q9
DT 01
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Best Local S
Matches 41
                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.

SETAUSDET GR.;
SUBMITTED (JUL-2001) to the EMBL/GenBank/DDB.;
Submitted (JUL-2001) to the EMBL/GenBank/DDB.;
SEMBL; BC011338, AAH11338.1;
MGD; MGI:1197007; B1rc2.
InterPro; IPR001370; B1rc2.
InterPro; IPR001370; B1R.
Pfam; PF006553; B1R; 3
PROSITE; PS01282; BTR_REPEAT_1; UNKNOWN_3.
PROSITE; PS01283; B1R_REPEAT_2; 3.
SEQUENCE 374 AA; 41915 MW; 1D2B54C32D7E46
Q9ESE8 PRELIMINARY;
Q9ESE8;
01-MAR-2001 (TrEMBLrel. 16,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q921NO;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sclurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-DEC-2001 (TYEMBLrel. 19, Created)
01-DEC-2001 (TYEMBLrel. 19, Last sequence update)
01-JUN-2002 (TYEMBLrel. 21, Last annotation update)
Similar to baculoviral IAP repeat-containing 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BIRC2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=10090;
                                                                                                                                             187 LAKAGFYYIGPGDRVACFACDGKLSNWERKDDAMSEHQRHFPSCPF 232
                                                                                                                                                              1 LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHEPKCPF 46
                                                                                                                                                                                                                      1 Similarity 89.3
41; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
                                                                                                                                                                                                                                         88.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL/GenBank/DDBJ databases
        Created)
                                                                                                                                                                                                                      Score 235; DB 11;
pred. No. 6.9e-23;
1; Mismatches 4;
                                           PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRT;
                                                                                                                                                                                                                                                                                                       1D2B54C32D7E46F3 CRC64;
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                                                                                                                                                                                                                                                              Length 374;
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RESULT
Q9QZC6
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Best Local S
Matches 39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-MAY-2000
01-MAY-2000
01-DEC-2001
PROSITE;
PROSITE;
PROSITE;
                                                                                                                                                                                                                                                               "Cloning of cDNA for rat inhibitor of apoptosis protein submitted (SEP-1999) to the EMBL/GenBank/DDBJ databases.
-I- SIMILARITY: CONTAINS 1 RING-TYPE FIND ETWO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "Cloning and Characterization of the Rat Homol Apoptosis Protein 1, 2, and 3 Genes."; Submitted (SEP-1999) to the EMBL/GenBank/DDBJ-1-SIMILARITY: CONTAINS 1 RING-TYPE ZINC FING EMBL; AF183431; AAG22971.1; -
HSSP; Q13499; 10BH.
                                                        SMART; SM00238; BIR; 3.
SMART; SM00114; CARD; 1
SMART; SM00184; RING; 1
                                                                                                                      Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ol-MAY-2000 (TrEMBLrel. 13, Created)
Ol-MAY-2000 (TrEMBLrel. 13, Last sequence update)
Ol-DEC-2001 (TrEMBLrel. 19, Last annotation update)
Inhibitor of apoptosis protein 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PROSITE; PS01282; BIR_REPEAT_1; PROSITE; PS50143; BIR_REPEAT_2; PROSITE; PS50209; CARD; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Inhibitor of apoptosis protein Rattus norvegicus (Rat).
                                                                                                                                                                                InterPro;
                                                                                                                                                                                                 InterPro;
                                                                                                                                                                                                                   InterPro;
                                                                                                                                                                                                                                          HSSP;
                                                                                                                                                                                                                                                                                                                                                          TISSUE-KIDNEY
                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q9QZC6
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-MAR-2001
01-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID-10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Rattus norvegicus (Rat)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Piam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        InterPro;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Holcik M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      176
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHIPKCPF
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                                                                                                                                                                                                                                        Q13490;
                                                                                                                                                                                                                                                           AF190020; AAF04585.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SM00238; BIR; 3.
SM00114; CARD; 1.
SM00184; RING; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               h 86.9%;
Similarity 84.8%;
39; Conservative
                                                                                                                                                                        ; IPR001370; BIR.
; IPR001315; CARD.
; IPR001841; Znf_r
PS01282; BIR_REPEAT_1;
PS50143; BIR_REPEAT_2;
PS50209; CARD; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IPR001370; BIR. IPR001315; CARD. IPR001841; Znf_r
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRELIMINARY;
                                                                                                                  zf-C3HC4;
                                                                                                                                        CARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       zf-C3HC4; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BIR; 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ą,
                                                                                                                                                                                                                                                                                                                                                                                                                                     Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              66750 MW;
                                                                                                                                                                            2nf_ring.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2nf_ring.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       16,
21,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Last
Last
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                                                                                                                                                                                                                                                                                                                                                                                                                                     Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Rat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B4F7089BD7CD285B CRC64;
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ne Rat Homo
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.8e-22;
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RESULT
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Q9ESE9
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Best Local S
Matches 38
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Best Local
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                                                                                                                                                          Q9IA70
Q9IA70;
01-OCT-2000
01-OCT-2000
01-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-MAR-2001
01-MAR-2001
01-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             **Cloning and Characterization "Cloning and characterization 1, 2, and 3
SEQUENCE FROM N.A.
STRAIN-BREED LEGHORN;
                                                                                                                      01-OCT-2000 (TrEMBLrel. 1
01-DEC-2001 (TrEMBLrel. 1
Inhibitor of apoptosis 1
Gallus gallus (Chicken).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pfam; PF00097; zf-C3HC
SMART; SM00238; BIR; 3
SMART; SM00114; CARD;
SMART; SM00184; RING;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-MAR-2001 (TrEMBLrel. 16, Last 01-JUN-2002 (TrEMBLrel. 21, Last Inhibitor of apoptosis protein 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Zinc-finger.
SEQUENCE 589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro; IPR001370;
InterPro; IPR001315;
InterPro; IPR001841;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Apoptosis Protein 1, 2, and Submitted (SEP-1999) to the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q9ESE9
                                                  NCBI_TaxID=9031;
                                                                                      Archosauria; Aves;
                                                                                                   Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HSSP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -!- SIMILARITY: CONTAINS 1
EMBL; AF183430; AAG22970.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=10116;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            176
                                                                                                                                                                                                                                                                                                                           189
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                                                                                                                                                                                                                                                                                                                          1 LAKAGEYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LAKAGFYYTGPGDRVACFACGGKLSNWEPNDDPLSEHRRHFPHCPF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q13490;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            norvegicus (Rat).
                                                                                                                                                                                                                                                                                                                                                                                               38;
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39; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        nger
                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PS01282; BIR_REPEAT_1;
PS50143; BIR_REPEAT_2;
PS50209; CARD; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       602
                                                                                                                                                                                            (TrEMBLrel.
                                                                                                                                                                                                                                   PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; zf-C3HC4;
18; BIR; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş,
                                                                                      Chordata; Craniata; Vertebrata; Euteleostomi; Neognathae; Galliformes; Phasianidae; Phasiani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     67326 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     66777 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                84.6%;
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CARD.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Znf_ring
 TISSUE-SPLEEN;
                                                                                                                                                            15,
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16,
21,
                                                                                                                                         (Fragment).
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RING-TYPE ZINC FINGER.
                                                                                                                                                          Last sequence update)
Last annotation update)
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Pred. No. 2.8e
2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                Score
Pred.
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of the I
Genes.",
                                                                                                                                                                                                                                   PRT;
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Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CC91385EEA62DE5A CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                226;
No. 1.
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No. 2
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e_Rat Homologs
                                                                                                                                                                                                                                   195
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                                                                                                                                                                                                                                                                                                                                                                                         Db
..8e-21;
5;
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.8e-22;
                                                                                                                                                                                                                                 ₿
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                                                                                                                                                                                                                                                                                                                                                                                                                               Length
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                                                                                                                                                                                                                                                                                                                                                             46
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; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             46
                                                                                                                                                                                                                                                                                                                                                                                                                                   602;
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                                                                                        Phasianinae;
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Best Local S
Matches 37
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Best Local S
Matches 37
 01-MAR-2001
01-MAR-2001
01-DEC-2001
                             Q9DDN2
Q9DDN2;
                                                                                                                                                                         NON_TER
                                                                                                                                                                                       InterPro; IPR001370; BIR.
Pfam; PF00653; BIR; 2.
SMART; SM00238; BIR; 2.
PROSITE; PS01282; BIR_REPEAT_1;
PROSITE; PS50143; BIR_REPEAT_2;
                                                                                                                                                                                                                                                                           STRAIN-BREED FAYOUMI; TISSUE-SPLEEN; MEDLINE-21158006; PubMed-11261557; Zhou H., Liu W., Lamont S.J.; "Genetic variation among chicken lin
                                                                                                                                                                                                                                                                                                                                                             01-OCT-2000 (TrEMBLrel 15, Last seq
01-DEC-2001 (TrEMBLrel 19, Last and
Inhibitor of apoptosis 1 (Fragment).
Gallus gallus (Chicken).
Eukaryota; Metazoa; Chordata; Crania
                                                                                                                                                                                                                                                          specific genes.";
Poult. Sci. 80:284-288(2001).
                                                                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  specific genes.";
Poult. Sci. 80:284-288(2001).
EMBL; AF221082; AAF35319.1; -.
HSSP; Q13490; 1QBH.
                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                    Q9IA69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        InterPro; IPR001370; BIR. Pfam; PF00653; BIR; 2. SMART; SM00238; BIR; 2.
                                                                                                                                                                                                                                                                                                                                                         Archosauria; Aves;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=9031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE-21158006; PubMed-11261557; Zhou H., Liu W., Lamont S.J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Genetic variation among chicken lines
                                                                                      51
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  50
                                                                                            LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF
                                                                                  Q13490; 1QBH
                                                                                                                                                                                                                                                 AF221083; AAF35320.1;
                                                                                                                          Similarity
37; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     . Similarity 80.4
37; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PS01282; BIR_REPEAT_1; PS50143; BIR_REPEAT_2;
                                                                                                                                                             197
197 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          195
195 AA;
(TrEMBLrel. (TrEMBLrel. (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                          (TrEMBLrel. 15, Creat
(TrEMBLrel. 15, Last
(TrEMBLrel. 19, Last
                                                                                                                          Conservative
                                       PRELIMINARY
                                                                                                                                                                                                                                                                                                                                                                                                                                  PRELIMINARY;
                                                                                                                                                              197
22602 MW;
                                                                                                                                                                                                                                                                                                                                                       Neognathae;
                                                                                                                                                                                                                                                                                                                                                     Chordata; Craniata; Verteb::ata; Euteleostomi;
Neognathae; Galliformes; Phasianidae; Phasiani
                                                                                                                                  83.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         22347 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             83.5%;
 16,
                                                                                                                                                                                                                                                                             chicken lines
                   Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                               Created)
                                                                                                                            Score 223; Db 1.,
                                                                                                                        Pred. No. 1.30
3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 223; DB 13;
Pred. No. 1.3e-21;
                                                                                                                                                             D7923DABCF623E1A CRC64;
                                       PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9C39BFA755E24E48 CRC64;
                                                                                                                                                                                          NN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                           sequence up
                                      324
                                                                                                                                                                                                                                                                                                                                                                                                                                   197
                                                                                                                                                                                                                                                                            and mammalian species
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        and mammalian
                                                                                                                                           DB 13;
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on update)
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057319;
01-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GARIUS GALLUS (Chicken).

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eutes Eukaryota; Metazoa; Neognathae; Galliformes; Phasianidae;
                                                              EMBL; AF00859; HSSP; Q13490;
                                                                                                                                                                                                                                                                                                                                                                                               YOU M., Ku P.-T., Hrdlickova R., Bose H.R. Jr.; "ch-IAP1, a member of the inhibitor-of-apoptosis protein mediator of the antiapoptotic activity of the v-Rel oncop Mol. Cell. Biol. 17:7328-7341(1997).

-I- FUNCTION: SUPPRESSOR OF APOPTOSIS IN ONCOPROTEIN V-RE
                                                                                 -i- SIMILARITY: CONTAINS 3 BIR DOMAINS (BACULOVIRA: APOPTOSIS PROTEIN REPEAT).
-i- SIMILARITY: CONTAINS A C3HC4-CLASS ZINC FINGER EMBL; AF008592; AAB88044.1; -.
                                                                                                                                                                       -1- DOMAIN: THE RING FINGER IS IMPORTANT
-1- SIMILARITY: MEMBER OF THE IAP FAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRAIN-WHITE LEGHORN; TISSUE-EMBRYONIC FIBROBLAST; MEDLINE-98038801; PubMed-9372964;
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"The apoptosis inhibitor ch-
v-Rel and c-Rel.",
Submitted (OCT-2000) to the
EMBL; AF311289; AAG42316.1;
                    InterPro;
                                            InterPro;
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01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
10hibitor of apoptosis PROTEIN 1 (IAP) (Inhibitor of
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PROSITE; PS01282; BIR_REPEAT_1;

PROSITE; PS50143; BIR_REPEAT_2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Apoptosis inhibitor ch-IAP1 Gallus gallus (Chicken).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxID=9031;
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                                                                                                                                                                                                                                                                                                                              SUBCELLULAR LOCATION: EXPRES THE V-REL-TRANSFORMED CELLS.
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                                                                                                                                                                                                                     PROCESS.
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37; Conserv
                  IPR001370; BIR. IPR001315; CARI
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Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
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Pred. No. 2.3e-21;
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Pl is a direct transcriptional
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AC Q8
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Best Local S
Matches 37
                                    Q8UWD2;
Q8UWD2;
01-MAR-2002
01-MAR-2002
01-JUN-2002
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STRAIN-WISTAR; TISSUE-OVARY;
Bradley C.K., Lareu R.R., Dharmarajan A.M.;
"Cloning and characterisation of an inhibitor of apopto.
"IAP) in the rat corpus luteum.";
Submitted (AUG-1998) to the EMBL/GenBank/DDBJ Jatabases
EMBL; AF081503; AAC32497.1; -.
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ZN_FING
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Pfam;
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Mammalia; Eutheria;
NCBI_TaxID=10116;
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01-NOV-1998 (TrEMBLrel. 08, Last sequence of control of control of control of control of apoptosis protein (Fragment).
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SMART; SM00114; CARD; 1.
SMART; SM00184; RING; 1.
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Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
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                                                                                                                                                                                                                LGKAAFYYTGPGDRVPCFACGGKLSNWEPNDDLLSEHRRHFPHCPF
                                                                                                                                                                                                                                    LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF 46
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PF00097;
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(TrEMBLrel.
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176
262
563
                                                                                                                    PRELIMINARY;
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; CARD; 1.
; zf-C3HC4;
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                                                                                                                                                                                                                                                                                                              81.3%;
78.3%;
                                                                                                                                                                                                                                                                                                                                                                         25209 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          68924 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 83.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; Repeat.
BIR REPEAT 1.
BIR REPEAT 2.
BIR REPEAT 3.
C3HC4-TYPE.
                                      20,
20,
21,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Dharmarajan A.M.;
ion of an inhibitor of apoptosis
                                  Created)
Last sequence update:)
Last annotation update
                                                                                                                                                                                                                                                                                         Score 217; DB Pred. No. 9.5e 2; Mismatches
                                                                                                                                                                                                                                                                                           2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ψ
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pred.
                                                                                                                    PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRT;
                                                                                                                                                                                                                                                                                                                                                                         213A52534D5EB56A CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADF47619650B44A6 CRC64;
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                                                                                                                  628
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                                                                                                                                                                                                                                                                                         DB<sup>11</sup>;
9.5e-21;
hes 8;
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                                    update)
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                                                                                                                                                                                                                                                                                                                              Length 224;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
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                                                                                                                                                                                                                150
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Best Local S
Matches 32
                     Pfam; PF00053; BIR; 3.
Pfam; PF00097; zf-C3HC4; 1.
SMART; SM00238; BIR; 3.
SMART; SM00184; RING; 1.
PROSITE; PS01282; BIR_REPEAT.
PROSITE; PS50143; BIR_REPEAT.
PROSITE; PS50089; ZF_RING_2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pfam; PF00653; BIR; 3.
Pfam; PF00659; CARD; 1.
Pfam; PF00097; zf-C3HC4; 1.
SMART; SM00238; BIR; 3.
SMART; SM00114; CARD; 1.
SMART; SM00114; CARD; 1.
SMART; SM00182; BIR; REPEAT; PROSITE; PS01282; BIR; REPEAT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q8UVF8;
01-MAR-2002
01-MAR-2002
01-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PROSITE;
                                                                                                                                                                         Submitted (NOV-2001) to the EMBL/GenBank/DDBJ databases EMBL; AF451854; AAL47170.1; -. IRR001370; BIR. InterPro; IPR001341; Znf_ring.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Brachydanio rerio (Zebrafish) (Zebra danio).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Cypriniformo Cyprinidae; Danio.
CYPRINIDER DANIO.
CYPTINIDER DANIO.
                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
Bridgham J.T., Johnson A.L.;
"Identification of chicken i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Inohara N., Nunez G.;
Submitted (NOV-2001) to the
EMBL; AF442500; AAL33679.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gallus gallus (Chicken).
Eukaryota; Metazoa; Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q8UVF8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
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InterPro; IPR001315; CARD.
InterPro; IPR001841; Znf_ring.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A. MEDLINE-20373792; Pubmed-10917738;
                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=9031;
                                                                                                                                                                                                                                                                                                                                                                                                             Gallus
                                                                                                                                                                                                                                                                                                                                                                                                                                Archosauria; Aves;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Inhibitor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Cell Death Differ.
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"Genes with homology to mammalian apoptosis regulators
                                                                                                                                                                                                                                                                         (IAP3).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                PS01282; BIR_REPEAT_1; UNKNOWN_2
PS50143; BIR_REPEAT_2; 3.
PS50089; ZF_RING_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  002 (TrEMBLrel.
002 (TrEMBLrel.
r of apoptosis p
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PS50089; ZF_RING_2; 1.
628 AA; 70098 MW;
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PS50143; BIR_REPEAT_2;
PS50209; CARD; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (TrEMBLrel.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                Neognathae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7:509-510(2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         73.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  . 20, Last sequence up. 21, Last annotation protein 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20,
    W.
                                                                                                                                                                                                                                                                                          inhibitor of apoptosis protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Created)
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Pred. No. 2
                                                                                                                                                                                                                                                                                                                                                                                                                                Craniata; Vertebrata; Euteleostomi;
; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRT;
  030A9F56CB6119BC CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5B68CEB6A87C8A95 CRC64;
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Query Best I

Local

Match

Length

493;

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RESULT 13
Q9EQ05
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Q9ESF0
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                                                                                                                                                                                                                                                                                                                                                                                        Query Match
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       "Cloning, characterization and regulation of inhibite protein in the rat corpus luteum."; Submitted (SEP-2000) to the EMBL/GenBank/DDBJ databases.
-!- SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER EMBL; AF304333; AAG41192.1; -- HSSP; Q13499; 10BH.
                                                                                                                                                                                                                                    Q9EQ05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pfam; PF00053; BIR; 3.
Pfam; PF00097; zf-C3HC4; 1.
Pfam; PF00098; BIR; 3.
SMART; SM00238; BIR; 3.
SMART; SM00184; RING; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Holcik M., Lefebvre C.A., Hicks K., Korneluk R.G.; "Cloning and Characterization of the Rat Homologs of the Apoptosis Protein 1, 2, and 3 Genes."; Submitted (SEP-1999) to the EMBL/GenBank/DDBJ databases.-!-SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER. EMBL; AF183429; AAG22969.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 09ESF0.
01-MAR-2001 (TrEMBLrel. 16, Created)
01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
Inhibitor of apoptosis protein 3.
                                                                                                                                    Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
NCBI_TaxID=10116;
                                                                                                                                                                                   01-MAR-2001 (TIEMBLIE) 16, Cre
01-MAR-2001 (TIEMBLIE) 16, LAS
01-JUN-2002 (TIEMBLIE) 21, LAS
101-JUN-2002 (TIEMBLIE) 21, LAS
                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                     PROSITE; PS01282; BIR_REPEAT_1; PROSITE; PS50143; BIR_REPEAT_2;
                                                                                  STRAIN-WISTAR; TISSUE-OVARY;
Lareu R.R., Bradley C.K., Lacher
                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                          Zinc-finger
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q9ESF0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro; IPR001370; BIR.
InterPro; IPR001841; Znf_ring.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Rattus norvegicus (Rat)
                                                                                                                                                                                                                                                                                                                184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   182 LASAGLYYTGVGDQVACFCCGGKLKNWEPGDRAWSEHKRHFPKCFF 227
                                                                                                                                                                                                                                                                                                                          1 LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFFKCPF
                                                                                                                                                                                                                                                                                                                                                                             Local
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                                                                                                                                                                                                                                                                                                            LASAGLYYTGIDDQVQCFCCGGKLKNWEPCDRAWSEHRRHFPNCFF 229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF
                                                                                                                                                                                                                                                                                                                                                             ch 65.5%;
l Similarity 67.4%;
31; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      34;
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IPR001370;
                                                                                                                                                                                                                                                                                                                                                                                                                496 AA;
                                                                                                                                                                                                                                                  PRELIMINARY;
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                                                                                                                                                                                                                                                                                                                                                                                                                56117 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Chordata; Craniata; Vertebrata; Euteleostomi; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                72.78;
                                                                                                                                                                                                                                                                                                                                                             Score 175; DB 11;
Pred. No. 8e-15;
1; Mismatches 14;
                                                                                                                                                                                               Last sequence update)
                                                                                                                                                                                                                         Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 194;
Pred. No. 2.
                                                                                                                                              Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Rat
                                                                                                                                                                                                                                                  PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRT;
                                                                                                                                                                                                                                                                                                                                                                                                               9BEF142AAEC5B798 CRC64;
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                                                                                     X
                                                                                   Friis
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.4e-17;
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                                                                     of R.
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                                                                      an ,
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                                                                     Dharmarajan
inhibitor of
                                                                                                                                                                                                                                                                                                                                                                                      Length 496;
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                                                                     apoptosis
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                                                                                                                                               Rattus
                                                                                                                                                                                                                                                                                                                                                             Gaps
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RESULT
Q8WRD9
ID DQ8
AC Q8
AC Q8
DT 01
DT 01
DT 01
DT 01
CS CC
CC EU
CC PtC
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Q9EQ04
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InterPro; IPR001841; Znf_ring.
InterPro; IPR001841; Znf_ring.
Pfam; PF00095; Ef-C3HC4; 1.
SMART; SM00238; BIR; 3.
SMART; SM00184; RING; 1.
    Q8WRD9 PRELIMINARY; PRT; 403 AA.
Q8WRD9;
01-MAR-2002 (TrEMBLrel. 20, Created)
01-MAR-2002 (TrEMBLrel. 20, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
101-bitor of apotosis protein 1-like protein.
0chlerotatus triseriatus.
Cutierotatus triseriatus.
Pterygota; Meoptera; Endopterygota; Diptera; Nematocera; Culi
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Q9EQ04;
01-MAR-2001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL; AF304334
HSSP; Q13490;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Lareu R.R., Bradley C.K., Lacher M., Friis "Cloning, characterization and regulation protein in the rat corpus luteum.", Submitted (SEP-2000) to the EMBL/GenBank/I
  Ochlerotatus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
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Mammalla; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rat
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Pfam; PF00097; zf-C3HC4; 1.
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Inhibitor of apoptosis protein
Rattus norvegicus (Rat)
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Pred. No. 8e-15;
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A Blitvich B.J., Beaty B.J., Kempf B.J., Mackie R.S., Blair C.D.,

A Black W.C. IV, Hughes M., Rayms-Keller A.;

IT "Identification and characterization of an inhibitor of apoptosis of protein 1 (IAP1) homolog from Aedes triseriatus mosquitoes.";

EMBL; AF447592; AAL46972.1;

IN EMBL; AF447592; AAL4660 MW; 7765708CB26D6FC2 CRC64;

SEQUENCE 403 AA; 44660 MW; 7765708CB26D6FC2 CRC64;
                                                                                                         Query Match 56.9%; Score 152; DB 5; Length 403; Best Local Similarity 55.6%; Pred. No. 7e-12; Matches 25; Conservative 6; Mismatches 14; Indels
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